



SEQUENCE LISTING

<110> FAVRILLE, INC.
GOLD, DANIEL P.
SHOPES, ROBERT J.

<120> METHOD AND COMPOSITION FOR ALTERING A T CELL MEDIATED
PATHOLOGY

<130> 30795-702.201

<140> 09/927,122
<141> 2001-08-10

<150> 60/224,723
<151> 2001-02-01

<150> 60/224,722
<151> 2000-08-11

<150> 60/266,133
<151> 2000-08-11

<160> 58

<170> PatentIn Ver. 2.1

<210> 1
<211> 22
<212> PRT
<213> Homo sapiens

<400> 1
Met Leu Gly Pro Cys Met Leu Leu Leu Leu Leu Leu Gly Leu Arg
1 5 10 15
Leu Gln Leu Ser Leu Gly
20

<210> 2
<211> 66
<212> DNA
<213> Homo sapiens

<400> 2
atgggtgggac cctgcatgct gctgctgctg ctgctgctag gcctgaggct acagctctcc 60
ctgggc 66

<210> 3
<211> 21
<212> PRT
<213> Apis mellifera

<400> 3

Met Lys Phe Leu Val Asn Val Ala Leu Val Phe Met Val Val Tyr Ile
1 5 10 15

Ser Tyr Ile Tyr Ala
20

<210> 4

<211> 63

<212> DNA

<213> *Apis mellifera*

<400> 4

atgaaattct tagtcaacgt tgcactagtt tttatggtcg tgtacatttc ttacatctat 60
gcg 63

<210> 5

<211> 7125

<212> DNA

<213> *Autographa californica nucleopolyhedrovirus*

<220>

<223> Expression vector

<400> 5

gcagttcggtt gacgccttcc tccgtgtggc cgaacacgtc gagcgggtgg tcgatgacca 60
gcggcgtgcc gcacgcgcgc cacaagtatc tgtacaccga atgatcgtcg ggcgaaggca 120
cgtcggcctc caagtggcaa tattggcaaa ttcgaaaata tatacagttg ggttggttgc 180
gcatatctat cgtggcggtt ggcatgtacg tccgaacggt gatttgcatg caagccgaaa 240
ttaaatcatt gcgattagtgc gattaaaaac gttgtacatc ctgcgtttta atcatgccgt 300
cgattaaatc gcgcaatcga gtcaagtgtg caaagtgtgg aataatgttt tctttgtatt 360
cccagatcaa gcgcagcgcg tattttaaca aactagccat cttgtaagtt agtttcattt 420
aatgcaactt tatccaataa tatattatgt atcgcacgtc aagaattaac aatgcgcccg 480
ttgtcgcatc tcaacacgac tatgatagag atcaataaaa gcgcgaatta aatagcttgc 540
gacgcaacgt gcacgatctg tgcacgcggt ccggcacgag ctttgattgt aataagtttt 600
tacgaagcga tgacatgacc cccgtagtga caacgatcac gcccataaga actgccgact 660
acaaaattac cgagtatgtc ggtgacgtta aaactattaa gccatccaat cgaccgtag 720
tcgaatcagg accgctggtg cgagaagccg cgaagtatgg cgaatgcac gtataacgtg 780
tgaggtccgc tcattagagc gtcattgtta gacaagaaag ctacatattt aattgatccc 840
gatgatttta ttgataaatt gaccctaact ccatacacgg tattctacaa tggcgggggt 900
ttggtcaaaa tttccggact gcgattgtac atgctgttaa cggctccgcc cactattaat 960
gaaattaaaa attccaattt taaaaaacgc agcaagagaa acatttgtat gaaagaatgc 1020
gtagaaggaa agaaaaatgt cgtcgacatg ctgaacaaca agattaatat gcctccgtgt 1080
ataaaaaaaaa tattgaacga tttgaaagaa aacaatgtac cgcgcgccgg tatgtacagg 1140
aagaggttta tactaaactg ttacattgca aacgtggttt cgtgtgccaa gtgtgaaaac 1200
cgatgtttta tcaaggctct gacgcatttc tacaaccacg actccaagtg tgtgggtgaa 1260
gtcatgcatc ttttaaatcaa atcccaagat gtgtataaac caccaaactg ccaaaaaatg 1320
aaaactgtcg acaagctctg tccgtttgct ggcaactgca agggctctcaa tcctatttgt 1380
aattattgaa taataaaaca attataaatg ctaaaattgt tttttattaa cgatacaaac 1440
caaacgcaac aagaacattt gtagtattat ctataattga aaacgcgtag ttataatcgc 1500
tgaggttaata tttaaaatca ttttcaaagt attcacagtt aatttgcgac aatataattt 1560
tattttcaca taaactagac gccttgctcg cttcttcttc gtattccttc tctttttcat 1620
ttttctctc ataaaaatta acatagttat tatcgatatc atatatgtat ctatcgata 1680

gagtaaattt	tttgttgta	taaatatata	tgtctttttt	aatgggggtg	atagtaccgc	1740
tgcgcatagt	ttttctgtaa	tttacaacag	tgctattttc	tggtagtctt	tcggagtgtg	1800
ttgctttaat	tattaaattt	atataatcaa	tgaatttggg	atcgctcggt	ttgtacaata	1860
tggtgccggc	atagtacgca	gcttcttcta	gttcaattac	accatttttt	agcagcaccg	1920
gattaacata	actttccaaa	atgttgtagc	aaccgttaaa	caaaaacagt	tcacctccct	1980
tttctatact	attgtctgcg	agcagttggt	tggtgttaaa	aataacagcc	attgtaatga	2040
gacgcacaaa	ctaatatcac	aaactggaaa	tgtctatcaa	tatatagtgt	ctgatattct	2100
cccagcatgc	ctgctattgt	cttcccaatc	ctcccccttg	ctgtcctgcc	ccacccacc	2160
ccccagaata	gaatgacacc	tactcagaca	atgcatgca	atttctcat	tttattagga	2220
aaggacagtg	ggagtggcac	cttccagggg	caaggaaggc	acgggggagg	ggcaaacaac	2280
agatggctgg	caactagaag	gcacagtcga	ggctgatcag	cgagctctag	tctagactag	2340
tataccgcgg	gccctgcagg	ccttaaggcg	cgcccgggcg	gccgcgtacg	attgtaaata	2400
aaatgtaatt	tacagtatag	tattttaatt	aatatacaaa	tgatttgata	ataattctta	2460
tttaactata	atatattgtg	ttgggttgaa	ttaaagggtc	cggcatcctc	aaatgcataa	2520
tttcatagtc	ccccttggtg	taagtgatgc	gtatttctga	atctttgtaa	aatagcacac	2580
aagactccaa	cgcgtttggc	gttttatttt	cttgctcgag	gatattcatg	agataattaa	2640
aatgataacc	atctcgcaaa	taaataagta	ttttactggt	ttcgtaacag	ttttgtaata	2700
aaaaaaccta	taaatatctc	ggattattca	taccgtccca	ccatcgggcg	tgctagcggg	2760
tccgagctcg	agatctgcag	ctgggtaccat	ggaattcgaa	gcttgctcgt	ggatggaaa	2820
gaaaagagtt	ctacagggaa	acttggaccc	gcttcattgga	agacagcttc	cccattgtta	2880
acgaccaaga	agtgatggat	gttttccttg	ttgtcaacat	gcgtcccact	agaccaaac	2940
gttggttaca	attcctggcc	caacacgctc	tgcgttgcca	ccccgactat	gtacctcatg	3000
acgtgattag	gatcgtcgag	ccttcattgg	tgggcagcaa	caacgagtac	cgcattcagc	3060
tggctaagaa	ggggcgccgc	tgcccaataa	tgaaccttca	ctctgagtac	accaactcgt	3120
tcgaacagtt	catcgatcgt	gtcatctggg	agaacttcta	caagcccata	gtttacatcg	3180
gtaccgactc	tgctgaagag	gaggaaattc	tccttgaagt	ttccctgggt	ttcaaagtaa	3240
aggagtttgc	accagacgca	cctctgttca	ctgggtccgg	gtattaaaac	acgatacatt	3300
gttatttagta	cattttattaa	gcgctagatt	ctgtgcgttg	ttgatttaca	gacaattgtt	3360
gtacgtattt	taataattca	ttaaatttat	aatctttagg	gtggtatggt	agagcgaaaa	3420
tcaaatgatt	ttcagcgtct	ttatatctga	atttaaatat	taaatcctca	atagatttgt	3480
aaaatagggt	tcgattagtt	tcaaacaagg	gttggttttc	cgaaccgatg	gctggactat	3540
ctaattggatt	ttcgctcaac	gccacaaaac	ttgccaaatc	ttgtagcagc	aatctagctt	3600
tgctgatatt	cgtttgtggt	ttgttttgta	ataaagggtc	gacgtcgttc	aaaatattat	3660
gcgcttttgt	atttctttca	tcactgtcgt	tagtgtacaa	ttgactcgac	gtaaaacacgt	3720
taaataaagc	tagcttggac	atatttaaca	tcgggcgtgt	tagctttatt	aggccgatta	3780
tcgtcgtcgt	cccaaccctc	gtcggttagaa	gttgcttccg	aagacgattt	tgccatagcc	3840
acacgacgcc	tatttaattgt	gtcggctaac	acgtccgcga	tcaaatttgt	agttgagctt	3900
tttgaattta	tttctgattg	cgggcgtttt	tgggcggggt	tcaatctaac	tgtgcccgat	3960
tttaattcag	ataacacggt	agaaagcgat	gggtgcaggc	gtggtaacat	ttcagacggc	4020
aaatctacta	atggcgccgg	tgggtggagc	gatgataaat	ctaccatcgg	tggaggcgca	4080
ggcggggctg	gcggcgagg	cggaggcgga	gggtggggcg	gtgatgcaga	cggcggttta	4140
ggctcaaatg	tctctttagg	caacacagtc	ggcacctcaa	ctattgtact	ggtttcgggc	4200
gccgtttttg	gtttgaccgg	tctgagacga	gtgcgatttt	tttcgtttct	aatagcttcc	4260
aacaattggt	gtctgtcgtc	taaagggtgca	gcgggttgag	gttccgtcgg	cattgggtgga	4320
gcgggcggca	attcagacat	cgatgggtgt	gggtgggtgt	gaggcgctgg	aatgttaggc	4380
acggggagaag	gtggtggcgg	cgggtccgcc	ggtataattt	gttctgggtt	agtttggtcg	4440
cgcacgattg	tgggcaccgg	cgcaggcgcc	gctggctgca	caacggaagg	tcgtctgctt	4500
cgaggcagcg	cttgggggtg	tggcaattca	atattataat	tggaaataca	atcgtaaaaa	4560
tctgctataa	gcattgtaat	ttcgctatcg	tttaccgtgc	cgatatttaa	caaccgctca	4620
atgtaagcaa	ttgtattgta	aagagattgt	ctcaagctcc	gcacgccgat	aacaagcctt	4680
ttcattttta	ctacagcatt	gtagtggcga	gacacttcgc	tgctcgtcgc	tcgagttcta	4740
tagtgtcacc	taaatcgtat	gtgtatgata	cataagggtta	tgtattaatt	gtagccgcgt	4800
tctaacgaca	atatgtccat	atggtgcact	ctcagtacaa	tctgctctga	tgccgcatag	4860
ttaagccagc	cccagacccc	gccaacaccc	gctgacgcgc	cctgacgggc	ttgtctgctc	4920
cgggcatccg	cttacagaca	agctgtgacc	gtctccggga	gctgcatgtg	tcagaggttt	4980

tcaccgtcat	caccgaaacg	cgcgagacga	aagggcctcg	tgatacgcct	atTTTTtatag	5040
gttaatgtca	tgataataat	ggTTTTcttag	acgtcaggtg	gcactTTTtcg	gggaaatgtg	5100
cgcggaaccc	ctatttgttt	atTTTTctaa	atacattcaa	atatgtatcc	gctcatgaga	5160
caataaccct	gataaatgct	tcaataatat	tgaaaaagga	agagtatgag	tattcaacat	5220
ttccgtgtcg	cccttattcc	ctTTTTtgcg	gcattTTtgcc	ttcctgtttt	tgctcaccca	5280
gaaacgctgg	tgaaagtaaa	agatgctgaa	gatcagttgg	gtgcacgagt	gggttacatc	5340
gaactggatc	tcaacagcgg	taagatcctt	gagagttttc	gccccgaaga	acgtTTTcca	5400
atgatgagca	ctTTTaaagt	tctgctatgt	ggcgcggtat	tatcccgtat	tgacgccggg	5460
caagagcaac	tcggtcgccg	catacactat	tctcagaatg	acttggttga	gtactacca	5520
gtcacagaaa	agcatcttac	ggatggcatg	acagtaagag	aattatgcag	tgctgccata	5580
accatgagtg	ataacactgc	ggccaactta	cttctgacaa	cgatcggagg	accgaaggag	5640
ctaaccgctt	TTTTgcacaa	catgggggat	catgtaactc	gccttgatcg	ttgggaaccg	5700
gagctgaatg	aagccatacc	aaacgacgag	cgtgacacca	cgatgcctgt	agcaatggca	5760
acaacgttgc	gcaaactatt	aactggcgaa	ctacttactc	tagcttcccg	gcaacaatta	5820
atagactgga	tggaggcgga	taaagttgca	ggaccacttc	tgcgctcggc	ccttccggct	5880
ggctggttta	ttgctgataa	atctggagcc	ggtgagcgtg	ggtctcgcgg	tatcattgca	5940
gcactggggc	cagatggtaa	gccctcccgt	atcgtagtta	tctacacgac	ggggagtcag	6000
gcaactatgg	atgaacgaaa	tagacagatc	gctgagatag	gtgcctcact	gattaagcat	6060
tggttaactgt	cagaccaagt	ttactcatat	atactttaga	ttgatttaaa	acttcatttt	6120
taattttaaaa	ggatctaggt	gaagatcctt	tttgataatc	tcatgaccaa	aatcccttaa	6180
cgtgagtttt	cgttccactg	agcgtcagac	cccgtagaaa	agatcaaagg	atcttcttga	6240
gatacttttt	ttctgcgcgt	aatctgctgc	ttgcaaacia	aaaaaccacc	gctaccagcg	6300
gtggtttggt	tgccggatca	agagctacca	actctttttc	cgaaggtaac	tggttccagc	6360
agagcgcaga	taccaaatac	tgctcttcta	gtgtagccgt	agttaggcca	ccacttcaag	6420
aactctgtag	caccgcctac	atacctcgct	ctgctaatcc	tgttaccagt	ggctgctgcc	6480
agtggcgata	agtcgtgtct	taccgggttg	gactcaagac	gatagttacc	ggataaggcg	6540
cagcggtcgg	gctgaacggg	gggttcgtgc	acacagccca	gcttgagcgg	aacgacctac	6600
accgaactga	gatacctaca	gcgtgagcat	tgagaaagcg	ccacgcttcc	cgaagggaga	6660
aaggcggaca	ggtatccggt	aagcggcagg	gtcggaacag	gagagcgcac	gagggagctt	6720
ccagggggaa	acgcctggta	tctttatagt	cctgtcgggt	ttcgccacct	ctgacttgag	6780
cgtcgatttt	tgtgatgctc	gtcagggggg	cggagcctat	ggaaaaacgc	cagcaacgcg	6840
gccttttttac	ggttcctggc	cttttgctgg	ccttttgctc	acatgttctt	tcctgcgtta	6900
tcccctgatt	ctgtggataa	ccgtattacc	gcctttgagt	gagctgatac	cgctcgccgc	6960
agccgaacga	ccgagcgcag	cgagtcagtg	agcgaggaag	cggagagcgg	cccaatacgc	7020
aaaccgcctc	tccccgcgcg	ttggccgatt	cattaatgca	ggttaacctg	gcttatcgaa	7080
attaatacga	ctcactatag	ggagaccggc	agatcgatct	gtcga		7125

<210> 6

<211> 8420

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: pTRABacHuLCHC1
DNA sequence

<400> 6

gcagttcggt	gacgccttcc	tccgtgtggc	cgaacacgtc	gagcgggtgg	tcgatgacca	60
gcggcgtgcc	gcacgcgacg	cacaagtatc	tgtacaccga	atgatcgtcg	ggcgaaggca	120
cgtcggcctc	caagtggcaa	tattggcaaa	ttcgaaaata	tatacagttg	ggttgtttgc	180
gcatacttat	cgtggcggtt	ggcatgtacg	tccgaacgtt	gatttgcatg	caagccgaaa	240
ttaaatcatt	gcgattagt	cgattaaaac	gttgtagatc	ctcgctttta	atcatgccgt	300
cgattaaatc	gcgcaatcga	gtcaagtgat	caaagtgtgg	aataatgttt	tctttgtatt	360
cccaggtcaa	gcgcagcgcg	tattttaaca	aactagccat	cttgtaagtt	agtttcattt	420

aatgcaactt	tatccaataa	tatattatgt	atcgcacgtc	aagaattaac	aatgcgcccg	480
ttgtcgcac	tcaacacgac	tatgatagag	atcaataaaa	gcgcgaatta	aatagcttgc	540
gacgcaacgt	gcacgatctg	tgacgcggtt	cgggcacgag	ctttgattgt	aataagtttt	600
tacgaagcga	tgacatgacc	cccgtagtga	caacgatcac	gccccaaaaga	actgccgact	660
acaaaattac	cgagtatgtc	ggtgacgtta	aaactattaa	gccatccaat	cgaccgttag	720
tcgaatcagg	accgctggtg	cgagaagccg	cgaagtatgg	cgaatgcac	gtataacgtg	780
tggagtccgc	tcattagagc	gtcatgttta	gacaagaaag	ctacatattt	aattgatccc	840
gatgatttta	ttgataaatt	gaccctaact	ccatacacgg	tattctacaa	tggcgggggt	900
ttggtcaaaa	tttccggact	gcgattgtac	atgctgttaa	cggctccgcc	cactattaat	960
gaaattaaaa	attccaattt	taaaaaacgc	agcaagagaa	acatttgtat	gaaagaatgc	1020
gtagaaggaa	agaaaaatgt	cgtcgacatg	ctgaacaaca	agattaatat	gcctccgtgt	1080
ataaaaaaaaa	tattgaacga	tttgaaagaa	aacaatgtac	cgcgcgccgg	tatgtacagg	1140
aagaggttta	tactaaactg	ttacattgca	aacgtggttt	cgtgtgccaa	gtgtgaaaaac	1200
cgatgtttta	tcaaggctct	gacgcatttc	tacaaccacg	actccaagtg	tgtgggtgaa	1260
gtcatgcac	ttttaatcaa	atcccaagat	gtgtataaac	caccaaactg	ccaaaaaatg	1320
aaaactgtcg	acaagctctg	tccgtttgct	ggcaactgca	agggctctcaa	tcctatttgt	1380
aattattgaa	taataaaaaca	attataaattg	ctaaatttgt	tttttattaa	cgatacaaac	1440
caaacgcaac	aagaacattt	gtagtattat	attataattga	aaacgcgtag	ttataatcgc	1500
tgaggtaata	ttttaaataca	ttttcaaattg	cttccacagtt	aatttgcgac	aatataattt	1560
tattttcaca	taaactagac	gccttgtcgt	cttcttcttc	gtattccttc	tctttttcat	1620
ttttctcctc	ataaaaaatta	acatagtatt	tatcgtatcc	atatatgtat	ctatcgtata	1680
gagtaaat	tttgttgtca	taaatatata	tgtctttttt	aatggggtgt	atagtaccgc	1740
tgcgcatagt	ttttctgtaa	tttacaacag	tgtctttttc	tggtagttct	tcggagtgtg	1800
ttgctttaat	tattaaattt	atataatcaa	tgaatttggg	atcgtcgggt	ttgtacaata	1860
tgttgccggc	atagtacgca	gcttcttcta	gttcaattac	accatttttt	agcagcaccg	1920
gattaacata	actttccaaa	atgttgtacg	aaccgttaaa	caaaaacagt	tcacctccct	1980
tttctatact	attgtctgcg	agcagttggt	tgttgttaaa	aataacagcc	attgtaatga	2040
gacgcacaaa	ctaataatcac	aaactggaaa	tgtctatcaa	tatatagtgt	ctgatatctc	2100
cccagcatgc	ctgctattgt	cttcccaatc	ctcccccttg	ctgtcctgcc	ccacccacc	2160
ccccagaata	gaatgacacc	tactcagaca	atgcgatgca	atttcctcat	tttattagga	2220
aaggacagtg	ggagtggcac	cttccagggg	caaggaaggc	acgggggagg	ggcaaacaac	2280
agatggctgg	caactagaag	gcacagtcga	ggctgatcag	cgagctctag	tctagactat	2340
tatttaccgg	gagacaggga	gaggctcttc	tgctgtagt	ggttgtgcag	agcctcatgc	2400
atcacggagc	atgagaagac	gttccccctgc	tgccacctgc	tcttgtccac	ggtgagcttg	2460
ctgtagagga	agaaggagcc	gtcggagtcc	agcacgggag	gcgtggtctt	gtagtgttct	2520
tccggctgcc	cattgctctc	ccactccacg	gcgatgtcgc	tgggatagaa	gcctttgacc	2580
aggcaggtca	ggctgacctg	gttcttgggt	agctcatccc	gggatggggg	caggggtgtac	2640
acctgtgggt	ctcggggctg	ccctttgggt	ttggagatgg	ttttctcgat	gggggctggg	2700
agggttttgt	tggagacctt	gcacttgtac	tccttgccat	tcagccagtc	ctggtgcagg	2760
acggtgagga	cgctgaccac	acggtacgtg	ctggtgtact	gctcctcccg	cggctttgtc	2820
ttggcattat	gcacctccac	gccgtccacg	taccagttga	acttgacctc	aggggtcttcg	2880
tggctcacgt	ccaccaccac	gcatgtgacc	tcaggggtcc	gggagatcat	gaggggtgtcc	2940
ttgggttttg	gggggaagag	gaagactgac	ggtcccccca	ggagttcagg	tgctgggcac	3000
ggtgggcatg	tgtgagtttt	gtcacaagat	ttgggtcaa	ctttcttgtc	caccttggtg	3060
ttgctgggct	tgtgattcac	gttgcatag	taggtctggg	tgcccaagct	gctggagggc	3120
acggtcacca	cgctgctgag	ggagtagagt	cctgaggact	gtaggacagc	cggaaggtg	3180
tgacgcgccg	tggtcagggc	gcctgagttc	cacgacaccg	tcaccggttc	ggggaagtag	3240
tccttgacca	ggcagcccag	ggccgctgtg	ccccagagg	tgctcttgga	ggaggggtgcc	3300
agggggaaga	ccgatggggc	cactagtgca	acgttgacta	agaatttcat	gcggccgcgt	3360
acgattgtaa	ataaaatgta	atttacagta	tagtatttta	attaatatac	aatgattttg	3420
ataataattc	ttatttaact	ataatatatt	gtgttgggtt	gaattaaagg	tcccggcatc	3480
ctcaaagtca	taatatcata	gtcccccttg	ttgtaagtga	tgctattttc	tgaatctttg	3540
taaaatagca	cacaggactc	caacgcgttt	ggcggtttat	tttcttgtc	gaggatatca	3600
tggagataat	taaaatgata	accatctcgc	aaataaataa	gtattttact	gttttcgtaa	3660
cagttttgta	ataaaaaaac	ctataaatat	tccggattat	tcataaccgtc	ccaccatcgg	3720

gcgtgctagc	ggatccatgg	tgggaccctg	catgctgctg	ctgctgctgc	tgctaggcct	3780
caccaagtgt	cttcatcttc	ccgccatctg	atgagcagtt	gaaatctgga	actgcctctg	3840
ttgtgtgcct	gctgaataac	ttctatccca	gagaggccaa	agtacagtgg	aagggtggata	3900
acgccctcca	atcgggtaac	ttccaggaga	gtgtcacaga	gcaggacagc	aaggacagca	3960
cctacagcct	cagcagcacc	ctgacgctga	gcaaagcaga	ctacgagaaa	cacaaagtct	4020
acgcctgcga	agtcacccat	cagggcctga	gctcgcccg	cacaaagagc	ttcaacaggg	4080
gagagtgtta	atagaagctt	gtcgttggat	ggaaaggaaa	agagttctac	agggaaactt	4140
ggacccgctt	catggaagac	agcttcccca	ttgttaacga	ccaagaagtg	atggatgttt	4200
tccttgttgt	caacatgcgt	cccactagac	ccaaccgttg	ttacaaattc	ctggcccaac	4260
acgctctgcg	ttgcgacccc	gactatgtac	ctcatgacgt	gattaggatc	gtcgagcctt	4320
catgggtggg	cagcaacaac	gagtaccgca	tcagcctggc	taagaagggc	ggcggctgcc	4380
caataatgaa	ccttcactct	gagtacacca	actcgttcga	acagttcatc	gatcgtgtca	4440
tctgggagaa	cttctacaag	cccacgtttt	acatcggtac	cgactctgct	gaagaggagg	4500
aaattctcct	tgaagtttcc	ctgggtgttc	aagtaaagga	gtttgcacca	gacgcacctc	4560
tgttcactgg	tccggcgtat	taaaacacga	tacattgtta	ttagtacatt	tattaagcgc	4620
tagattctgt	gcgttgttga	tttacagaca	attgttgtac	gtattttaat	aattcattaa	4680
at ttataatc	tttagggtag	tatgttagag	cgaaaatcaa	atgattttca	gcgtctttat	4740
atctgaatct	aaatattaaa	tcctcaatag	at ttgtaaaa	taggtttcga	ttagtttcaa	4800
acaaggggtg	tttttccgaa	ccgatggctg	gactatctaa	tggattttcg	ctcaacgcca	4860
caaaacttgc	caaatcttgt	agcagcaatc	tactgtttgc	gatattcggt	tgtgttttgt	4920
tttgaataaa	aggttcgacg	tcgttcaaaa	tattatgcgc	ttttgtattt	ctttcatcac	4980
tgctgttagt	gtacaattga	ctcgacgtaa	acacgttaaa	taaagctagc	ttggacatat	5040
ttaacatcgg	gcgtgttagc	tttattaggc	cgattatcgt	cgctcgtcca	accctcgtcg	5100
ttagaagttg	cttccgaaga	cgattttgcc	atagccacac	gacgcctatt	aattgtgtcg	5160
gctaacacgt	ccgcgatcaa	at ttgtagtt	gagctttttg	gaattatttc	tgattgcggg	5220
cgtttttggg	cgggtttcaa	tctaactgtg	cccgatttta	attcagacaa	cacgttagaa	5280
agcgatgggt	caggcggtgg	taacatttca	gacggcaaat	ctactaatgg	cggcggtggg	5340
ggagctgatg	ataaatctac	catcggtgga	ggcgagggcg	gggctggcg	cggaggcgga	5400
ggcggagggt	gtggcggtga	tgcagacggc	ggtttaggct	caaatgtctc	tttaggcaac	5460
acagtcggca	cctcaactat	tgtactgggt	tcgggcgcgc	tttttggttt	gaccgggtctg	5520
agacgagtgc	gatttttttc	gtttctaata	gcttccaaca	attgttgtct	gtcgtctaaa	5580
ggtgcagcgg	gttgaggttc	cgtcggcatt	ggtggagcgg	gcggcaattc	agacatcgat	5640
ggtggtgggt	gtggtggagg	cgctggaatg	ttaggcacgg	gagaaggtgg	tggcggcggt	5700
gccgcgggta	taatttgttc	tggtttagtt	tgttcgcgca	cgattgtggg	caccggcgca	5760
ggcgccgctg	gctgcacaac	ggaaggctgt	ctgcttcgag	gcagcgcttg	gggtgggtggc	5820
aattcaatat	tataattgga	atacaaatcg	taaaaatctg	ctataagcat	tgtaatttcg	5880
ctatcgttta	ccgtgccgat	at tttaacaac	cgctcaatgt	aagcaattgt	attgtaaaga	5940
gattgtctca	agctccgcac	gccgataaca	agccttttca	tttttactac	agcattgtag	6000
tggcgagaca	cttcgctgtc	gtcgactcga	gttctatagt	gtcacctaaa	tcgtatgtgt	6060
atgatacata	aggttatgta	ttaattgtag	ccgcgtttcta	acgacaatat	gtccatatgg	6120
tgactctctca	gtacaatctg	ctctgatgcc	gcatagttaa	gccagccccg	acaccgcgca	6180
acaccgcgtg	acgcgccttg	acgggcttgt	ctgctcccgg	catccgctta	cagacaagct	6240
gtgaccgtct	ccgggagctg	catgtgtcag	aggttttcac	cgatcatcacc	gaaacgcgcg	6300
agaggaaagg	gcctcgtgat	acgcctattt	ttatagggtta	atgtcatgat	aataatgggt	6360
tcttagacgt	caggtggcac	ttttcgggga	aatgtgcgcg	gaacccttat	ttgtttattt	6420
ttctaaatac	attcaaatat	gtatccgctc	atgagacaat	aaccctgata	aatgcttcaa	6480
taatattgaa	aaaggaagag	tatgagtatt	caacatttcc	gtgtcgccct	tattcccttt	6540
tttgccggcat	tttgccctcc	tgtttttgct	caccagaaa	cgctgggtgaa	agtaaaagat	6600
gctgaagatc	agttgggtgc	acgagtgggt	tacatcgaa	tggatctcaa	cagcggttaag	6660
atccttgaga	gttttcgccc	cgaagaacgt	tttccaatga	tgagcacttt	taaagttctg	6720
ctatgtggcg	cggattattc	ccgtattgac	gccgggcaag	agcaactcgg	tcgccgcata	6780
cactattctc	agaatgactt	ggttgagtac	tcaccagtca	cagaaaagca	tcttacggat	6840
ggcatgacag	taagagaatt	atgcagtgtc	gccataacca	tgagtataaa	cactgcggcc	6900
aacttacttc	tgacaacgat	cggaggaccg	aaggagctaa	ccgctttttt	gcacaacatg	6960
ggggatcatg	taactcgcct	tgatcgttgg	gaaccggagc	tgaatgaagc	cataccaaac	7020

gacgagcgtg	acaccacgat	gcctgtagca	atggcaacaa	cgttgcgcaa	actattaact	7080
ggcgaactac	ttactctagc	ttcccggcaa	caattaatag	actggatgga	ggcggataaa	7140
ggtgcaggac	cacttctgcg	ctcgccctt	cggctggct	ggtttattgc	tgataaatct	7200
ggagccggtg	agcgtgggtc	tcgcggtatc	attgcagcac	tggggccaga	tggttaagccc	7260
ttccgtatcg	tagttatcta	cacgacgggg	agtcaggcaa	ctatggatga	acgaaataga	7320
cagatcgctg	agataggtgc	ctcactgatt	aagcattggg	aactgtcaga	ccaagtttac	7380
tcatatatac	tttagatgat	ttaaaacttc	atttttaatt	taaaaggatc	taggtgaaga	7440
tcctttttga	taatctcatg	accaaactcc	cttaacgtga	gttttcgttc	caactgagcgt	7500
cagaccccg	agaaaagatc	aaaggatctt	cttgagatcc	ttttttctg	cgcgtaatct	7560
gctgcttgca	aacaaaaaaa	ccaccgctac	cagcggtggt	ttgtttgccg	gatcaagagc	7620
taccaactct	ttttccgaag	gtaactggct	tcagcagagc	gcagatacca	aatactgtcc	7680
ttctagtgt	gccgtagtta	ggccaccact	tcaagaactc	tgtagcaccg	cctacatacc	7740
tcgctctgct	aatcctgtta	ccagtggctg	ctgccagtgg	cgataagtcg	tgtcttaccg	7800
ggttggaactc	aagacgatag	ttaccggata	aggcgcagcg	gtcgggctga	acgggggggt	7860
cgtgcacaca	gcccagcttg	gagcgaacga	cctacaccga	actgagatac	ctacagcgtg	7920
agcattgaga	aagcgccacg	cttcccgaag	ggagaaaggc	ggacaggtat	ccggttaagcg	7980
gcagggctcg	aacaggagag	cgcacgaggg	agcttcacag	gggaaacgcc	tggtatcttt	8040
atagtccctg	cgggtttcgc	cacctctgac	ttgagcgtcg	atttttgtga	tgctcgtcag	8100
gggggcccgg	cctatgaaa	aacgccagca	acgcggcctt	tttacgggtc	ctggcctttt	8160
gctggccttt	tgctcacatg	ttctttcctg	gcttatcccc	tgattctgtg	gataaccgta	8220
ttaccgcctt	tgagtgagct	gataccgctc	gccgcagccg	aacgaccgag	cgcagcgagt	8280
cagtgaagca	ggaagcggaa	gagcgcccaa	tacgcaaacc	gcctctcccc	gcgcgttggc	8340
cgattcatta	atgcagggtta	acctggctta	tcgaaattaa	tacgactcac	tataggggaga	8400
ccggcagatc	gatctgtcga					8420

<210> 7

<211> 8415

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: pTRABacHuLCH1

DNA sequence

<400> 7

gcagttcggt	gacgccttcc	tccgtgtggc	cgaacacgtc	gagcgggtgg	tcgatgacca	60
gcggcgtgcc	gcacgcgacg	cacaagtatc	tgtacaccga	atgatcgctg	ggcgaaggca	120
cgtcggcctc	caagtggcaa	tattggcaaa	ttcgaaaata	tatacagttg	ggttggttgc	180
gcatatctat	cgtggcggtt	ggcatgtacg	tccgaacggt	gatttgcatg	caagccgaaa	240
ttaaatacatt	gcgattagt	cgattaaaac	gttgtacatc	ctcgctttta	atcatgccgt	300
cgattaaatc	gcgcaatcga	gtcaagtgat	caaagtgtgg	aataatgttt	tctttgtatt	360
cccagtgcaa	gcgcagcgcg	tattttaaca	aactagccat	cttgtaagtt	agtttcattt	420
aatgcaactt	tatccaataa	tatattatgt	atcgacgctc	aagaattaac	aatgcgcccc	480
ttgtcgcata	tcaacacgac	tatgatagag	atcaataaaa	gcgcgaatta	aatagcttgc	540
gacgcaacgt	gcacgatctg	tgacgcggtt	ccggcacgag	ctttgattgt	aataagtttt	600
tacgaagcga	tgacatgacc	cccgtagtga	caacgatcac	gccccaaaaga	actgccgact	660
acaaaattac	cgagtatgtc	ggtgacgtta	aaactattaa	gccatccaat	cgaccgttag	720
tcgaatcagg	accgctgggt	cgagaagccg	cgaagtatgg	cgaatgcata	gtataacgtg	780
tggagtccgc	tcattagagc	gtcatgttta	gacaagaaag	ctacatattt	aattgatccc	840
gatgatttta	ttgataaatt	gaccctaact	ccatacacgg	tattctacaa	tggcgggggt	900
ttggtcaaaa	tttccggact	gcgattgtac	atgctgttaa	cggctccgcc	cactattaat	960
gaaattaaaa	attccaattt	taaaaaacgc	agcaagagaa	acatttgtat	gaaagaatgc	1020
gtagaaggaa	agaaaaatgt	cgtcgacatg	ctgaacaaca	agattaatat	gcctccgtgt	1080
ataaaaaaaa	tattgaacga	tttgaaagaa	aacaatgtac	cgcgcggcgg	tatgtacagg	1140

aagagggttta	tactaaactg	ttacattgca	aacgtgggtt	cgtgtgccaa	gtgtgaaaac	1200
cgatgtttta	tcaaggctct	gacgcatttc	tacaaccacg	actccaagt	tgtgggtgaa	1260
gtcatgcac	ttttaatcaa	atcccaagat	gtgtataaac	caccaaactg	ccaaaaaatg	1320
aaaactgtcg	acaagctctg	tccgtttgct	ggcaactgca	aggggtctca	tcctatttgt	1380
aattattgaa	taataaaaca	attataaatg	ctaaatttgt	tttttattaa	cgatacaaac	1440
caaacgcaac	aagaacattt	gtagtattat	ctataattga	aaacgcgtag	ttataatcgc	1500
tgaggtaata	tttaaaatca	ttttcaaagt	attcacagtt	aatttgcgac	aatataattt	1560
tattttcaca	taaactagac	gccttgctgt	cttcttcttc	gtattccttc	tctttttcat	1620
ttttctcctc	ataaaaatta	acatagttat	tatcgtatcc	atatatgtat	ctatcgtata	1680
gagtaaattt	tttgttgtca	taaatatata	tgtctttttt	aatgggggtg	atagtaccgc	1740
tgcgcatagt	ttttctgtaa	tttacaacag	tgctattttc	tggtagtctt	tcggagtgtg	1800
ttgctttaat	tattaaattt	atataatcaa	tgaatttggt	atcgtcgggt	ttgtacaata	1860
tggtgcccgc	atagtacgca	gcttcttcta	gttcaattac	accatttttt	agcagcaccg	1920
gattaacata	actttccaaa	atgttgtacg	aaccgttaaa	caaaaacagt	tcacctccct	1980
tttctatact	attgtctgcg	agcagttggt	tgttgttaaa	aataacagcc	attgtaatga	2040
gacgcacaaa	ctaatatcac	aaactggaaa	tgtctatcaa	tatatagtgt	ctgatatctc	2100
cccagcatgc	ctgctattgt	cttcccaatc	ctcccccttg	ctgtcctgcc	ccaccccacc	2160
cccagaata	gaatgacacc	tactcagaca	atcgatgca	atttcctcat	tttattaggga	2220
aaggacagtg	ggagtggcac	cttccagggg	caagggaagg	acgggggagg	ggcaacaac	2280
agatggctgg	caactagaag	gcacagtcga	ggctgatcag	cgagctctag	tctagactat	2340
tatttaccgg	gagacaggga	gaggctcttc	tgctgtagt	ggttgtgcag	agcctcatgc	2400
atcacggagc	atgagaagac	gttccccctg	tgccacctgc	tcttgtccac	ggtgagcttg	2460
ctgtagagga	agaaggagcc	gtcggagtcc	agcacgggag	gcgtgggtct	gtagtgtgtc	2520
tccggctgcc	cattgctctc	ccactccacg	gcgatgtcgc	tgggatagaa	gcctttgacc	2580
aggcaggtca	ggctgacctg	gttcttgggt	agctcatccc	gggatggggg	caggggtgtac	2640
acctgtgggt	ctcggggctg	ccctttgggt	ttggagatgg	ttttctcgat	gggggctggg	2700
agggtcttgt	tggagacctt	gcacttgtac	tccttgccat	tcagccagtc	ctggtgcagg	2760
acgggtagga	cgctgaccac	acgggtacgt	ctggtgtact	gctcctccc	cggctttgtc	2820
ttggcattat	gcacctccac	gccgtccacg	taccagttga	acttgacctc	aggggtcttc	2880
tggctcacgt	ccaccaccac	gcatgtgacc	tcaggggtcc	gggagatcat	gaggggtgtc	2940
ttgggttttg	gggggaagag	gaagactgac	ggtcccccca	ggagttcagg	tgctgggcac	3000
ggtgggcatg	tgtgagtttt	gtcacaagat	ttgggtcaa	ctttcttgtc	caccttggtg	3060
ttgctgggct	tgtgattcac	gttgcatgat	taggtctggg	tgcccaagct	gctggagggc	3120
acggtcacca	cgctgctgag	ggagtagagt	cctgaggact	gtaggacagc	cgggaagggt	3180
tgcacgccgc	tggtcagggc	gcctgagttc	cacgacaccg	tcaccgggtc	ggggaagtag	3240
tccttgacca	ggcagcccag	ggccgctgtg	ccccagagg	tgctcttgga	ggagggtgcc	3300
agggggaaga	cactagggcc	cactagtgtc	acgttgacta	agaatttcat	gcggccgcgt	3360
acgattgtaa	ataaaatgta	atttacagta	tagtatttta	attaatatac	aatgatattg	3420
ataataattc	ttattttaact	ataatatatt	gtgttgggtt	gaattaaagg	tcccggcatc	3480
ctcaaagtca	taatatcata	gtcccccttg	ttgtaagtga	tgctattttc	tgaatctttg	3540
taaaatagca	cacaggactc	caacgcgttt	ggcgttttat	tttcttgttc	gaggatatca	3600
tggagataat	taaaatgata	accatctcgc	aaataaataa	gtattttact	gttttcgtaa	3660
cagttttgta	ataaaaaaac	ctataaatat	tccggattat	tcataaccgt	ccaccatcgg	3720
gcgtgctagc	ggatccatgg	tgggaccttg	catgctgctg	ctgctgctgc	tgctaggcct	3780
caccagtggt	cactctgttc	ccgccctcct	ctgaggagct	tcaagccaac	aaggccacac	3840
tgggtgtgtc	cataagtgac	ttctacccgg	gagccgtgac	agtggcctgg	aaggcagata	3900
gcagccccgt	caaggcggga	gtggagacca	ccacaccctc	caaacaaagc	aacaacaagt	3960
acgcggccag	cagctacctg	agcctgacgc	ctgagcagtg	gaagtcccac	aaaagctaca	4020
gctgccaggt	cacgcatgaa	gggagcaccg	tggagaagac	agtggcccct	acagaatgtt	4080
catagtaaaa	gcttgtcgtt	ggatggaaag	gaaaagagtt	ctacagggaa	acttggaacc	4140
gcttcatgga	agacagcttc	cccattgtta	acgaccaaga	agtgatggat	gttttccttg	4200
ttgtcaacat	gcgtcccact	agacccaacc	gttggttaca	attcctggcc	caacacgctc	4260
tgcggtgcga	ccccgactat	gtacctcatg	acgtgattag	gatcgtcgag	ccttcatggg	4320
tgggcagcaa	caacgagtac	cgcatcagcc	tggctaagaa	gggcggcggc	tgcccaataa	4380
tgaaccttca	ctctgagtac	accaactcgt	tgaacagtt	catcgatcgt	gtcatctggg	4440

agaacttcta	caagcccatc	gtttacatcg	gtaccgactc	tgctgaagag	gaggaaattc	4500
tccttgaagt	ttccctgggtg	ttcaaagtaa	aggagtttgc	accagacgca	cctctgttca	4560
ctggctcggc	gtattaaaac	acgatacatt	gttattagta	cattttattaa	gcgctagatt	4620
ctgtgcgttg	ttgattttaca	gacaattggt	gtacgtattt	taataattca	ttaaatttat	4680
aatcttttagg	gtggtatggt	agagcgaaaa	tcaaattgatt	ttcagcgtct	ttatatctga	4740
atttaaataat	taaatcctca	atagatttgt	aaaatagggt	tcgattagtt	tcaaacaagg	4800
gttggtttttc	cgaaccgatg	gctggactat	ctaattggatt	ttcgctcaac	gccacaaaac	4860
ttgccaaatc	ttgtagcagc	aatctagctt	tgctgatatt	cgtttgtggt	ttgttttgta	4920
ataaagggttc	gacgtcgttc	aaaatatttat	gcgcttttgt	atttctttca	tcactgtcgt	4980
tagtgtacaa	ttgactcgac	gtaaacacgt	taaataaagc	tagcttggac	atatttaaca	5040
tcgggcgtgt	tagctttatt	aggccgatta	tcgtcgtcgt	cccaaccctc	gtcgttagaa	5100
gttgcttccg	aagacgattt	tgccatagcc	acacgacgcc	tattaattgt	gtcggctaac	5160
acgtcccgga	tcaaatttgt	agttgagctt	tttggaaatta	tttctgattg	cgggcgtttt	5220
tgggcgggtt	tcaatctaac	tgtgcccgat	tttaattcag	acaacacgtt	agaaagcgat	5280
ggtgcaggcg	gtggtaacat	ttcagacggc	aaatctacta	atggcggcgg	tgggtggagct	5340
gatgataaat	ctaccatcgg	tggaggcgca	ggcggggctg	gcggcggagg	cggaggcgga	5400
ggtggtggcg	gtgatgcaga	cggcggttta	ggctcaaattg	tctcttttagg	caacacagtc	5460
ggcacctcaa	ctattgtact	ggtttcgggc	gccgtttttg	gtttgaccgg	tctgagacga	5520
gtgcgatttt	tttcggttct	aatagcttcc	aacaattggt	gtctgtcgtc	taaagggtgca	5580
gcgggttgag	gttcgcgtcg	cattggtgga	gcgggcggca	attcagacat	cgatggtggt	5640
ggtggtggtg	gaggcgctgg	aatggttagc	acgggagaag	gtggtggcgg	cgggtgccgc	5700
ggtataattt	gttctggttt	agtttggtcg	cgcacgattg	tgggcaccgg	cgcaggcgcc	5760
gctggtgca	caacggaagg	tcgtctgctt	cgaggcagcg	cttgggggtg	tggcaattca	5820
atattataat	tggaaatacaa	atcgtaaaaa	tctgctataa	gcattgtaat	ttcgctatcg	5880
tttaccgtgc	cgatatttaa	caaccgctca	atgtaagcaa	ttgtattgta	aagagattgt	5940
ctcaagctcc	gcacgccgat	aacaagcctt	ttcattttta	ctacagcatt	gtagtggcga	6000
gacacttcgc	tgctcgtcag	tcgagttcta	tagtgtcacc	taaatcgat	gtgtatgata	6060
cataaggtta	tgtatttaatt	gtagccgcgt	tctaacgaca	atatgtccat	atggtgcact	6120
ctcagtacaa	tctgctctga	tgccgcatag	ttaagccagc	cccacacccc	gccaacaccc	6180
gctgacgcgc	cctgacgggc	ttgtctgctc	ccggcatccg	cttacagaca	agctgtgacc	6240
gtctccggga	gctgcatgtg	tcagagggtt	tcaccgtcat	caccgaaacg	cgcgagagga	6300
aagggcctcg	tgatacgcct	atttttatag	gttaatgtca	tgataataat	ggtttcttag	6360
acgtcagggtg	gcacttttcg	gggaaatgtg	cgcggaaccc	ctatttgttt	atttttctaa	6420
atacattcaa	atatgtatcc	gctcatgaga	caataaccct	gataaatgct	tcaataatat	6480
tgaaaaggga	agagtatgag	tattcaacat	ttcgtgtcgt	cccttattcc	cttttttgcg	6540
gcattttgcc	ttcctgtttt	tgctcaccga	gaaacgctgg	tgaaagtaaa	agatgctgaa	6600
gatcagttgg	gtgcacgagt	gggttacatc	gaactggatc	tcaacagcgg	taagatcctt	6660
gagagttttc	gccccgaaga	acgtttttcca	atgatgagca	cttttaaagt	tctgctatgt	6720
ggcgcggtat	tatcccgtat	tgacgcgggg	caagagcaac	tcggtcgccg	catacactat	6780
tctcagaatg	acttggttga	gtactcacca	gtcacagaaa	agcatcttac	ggatggcatg	6840
acagtaagag	aattatgcag	tgctgccata	accatgagtg	ataaactgc	ggccaactta	6900
cttctgacaa	cgatcggagg	accgaaggag	ctaaccgctt	ttttgcacaa	catgggggat	6960
catgtaactc	gccttgatcg	ttgggaaccg	gagctgaatg	aagccatacc	aaacgacgag	7020
cgtgacacca	cgatgcctgt	agcaatggca	acaacgttgc	gcaaactatt	aactggcgaa	7080
ctacttactc	tagcttcccc	gcaacaatta	atagactgga	tggaggcgga	taaagttgca	7140
ggaccacttc	tgcgctcggc	ccttcgggct	ggctgggtta	ttgctgataa	atctggagcc	7200
ggtgagcgtg	ggtctcgcgg	tatcattgca	gcactggggc	cagatggtaa	gccctcccgt	7260
atcgtagtta	tctacacgac	ggggagtcag	gcaactatgg	atgaacgaaa	tagacagatc	7320
gctgagatag	gtgcctcact	gattaagcat	tggttaactgt	cagaccaagt	ttactcatat	7380
atactttaga	ttgattttaa	acttcatttt	taatttaaaa	ggatctaggt	gaagatcctt	7440
tttgataatc	tcatgaccaa	aatcccttaa	cgtgagtttt	cgttccactg	agcgtcagac	7500
cccgtagaaa	agatcaaagg	atcttcttga	gacccctttt	ttctgcgcgt	aatctgctgc	7560
ttgcaaacaa	aaaaaccacc	gctaccagcg	gtggtttgtt	tgccggatca	agagctacca	7620
actctttttc	cgaaggtaac	tggcttcagc	agagcgcaga	taccaaatac	tgtccttcta	7680
gtgtagccgt	agttaggcca	ccacttcaag	aactctgtag	caccgcctac	atacctcgct	7740

ctgctaatacc	tgttaccagt	ggctgctgcc	agtggcgata	agtcgtgtct	taccggggtg	7800
gactcaagac	gatagttacc	ggataaggcg	cagcggtcgg	gctgaacggg	gggttcgtgc	7860
acacagccca	gcttgagcg	aacgacctac	accgaactga	gataacctaca	gcgtgagcat	7920
tgagaaagcg	ccacgcttcc	cgaagggaga	aaggcggaca	ggtatccggt	aagcggcagg	7980
gtcggaaacag	gagagcgcac	gagggagctt	ccagggggaa	acgcctggta	tctttatagt	8040
cctgtcgggt	ttcgccacct	ctgacttgag	cgtcgatttt	tgtgatgctc	gtcagggggg	8100
cggagcctat	ggaaaaacgc	cagcaacgcg	gcctttttac	ggttcctggc	cttttgctgg	8160
ccttttgctc	acatgttctt	tcctgcgtta	tcccctgatt	ctgtggataa	ccgtattacc	8220
gcctttgagt	gagctgatac	cgctcgccgc	agccgaacga	ccgagcgag	cgagtcagt	8280
agcgaggaag	cgaagagcg	cccaatacgc	aaaccgcctc	tcccgcgcg	ttggccgatt	8340
cattaatgca	ggttaacctg	gcttatcgaa	attaatacga	ctcactatag	ggagaccggc	8400
agatcgatct	gtcga					8415

<210> 8

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 8

actagttttt	atggtcgtgt	acattttctta	catctatgcg	40
------------	------------	-------------	------------	----

<210> 9

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 9

aggcctgagg	ctacagctct	ccctgggc	28
------------	------------	----------	----

<210> 10

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 10

catcagaatc	cttactttgt	gacac	25
------------	------------	-------	----

<210> 11

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

 <400> 11
 ccatagacct catgtctagc acag 24

 <210> 12
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 12
 ctgtgcacct ccttcccatt cac 23

 <210> 13
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 13
 ggcagtatct ggagtcattg agg 23

 <210> 14
 <211> 32
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 14
 gcgacctcgg gtgggcccac cgttgtttca gg 32

 <210> 15
 <211> 33
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 15
 cagctggtac accacttggt gagggttctg gat 33

<210> 16
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 16
actagtgcaa cggtgactaa gaatttcacg cggccgc 37

<210> 17
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 17
gcggccgcac gaaattctta gtcaacgctg cactagt 37

<210> 18
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 18
gcggatccat ggtgggaccc tgcacgtgc tgctgctgct gctgctaggc ctggaattcc 60

<210> 19
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 19
ggaattccag gcctagcagc agcagcagca gcagcatgca gggcccacc atggatccgc 60

<210> 20
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 20
tgtgactagt atgtatcggc ccatacgggtct tccccct 37

<210> 21
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 21
tttctagact attatttacc cggagacagg gagag 35

<210> 22
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 22
ctaggcctat gtatcaccaa gtgtcttcat cttcccgcca tct 43

<210> 23
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 23
cccaagcttc tattaacact ctcccctggt gaagct 36

<210> 24
<211> 279
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: TCR alpha chain

<400> 24
Met Ala Cys Pro Gly Phe Leu Trp Ala Leu Val Ile Ser Thr Cys Leu
1 5 10 15
Glu Phe Ser Met Ala Gln Thr Val Thr Gln Ser Gln Pro Glu Met Ser
20 25 30

<220>

<223> Description of Unknown Organism: TCR beta chain

<400> 25

Met	Gly	Thr	Ser	Leu	Leu	Cys	Trp	Met	Ala	Leu	Cys	Leu	Leu	Gly	Ala	
1				5					10					15		
Asp	His	Ala	Asp	Thr	Gly	Val	Ser	Gln	Asn	Pro	Arg	His	Lys	Ile	Thr	
			20					25					30			
Lys	Arg	Gly	Gln	Asn	Val	Thr	Phe	Arg	Cys	Asp	Pro	Ile	Ser	Glu	His	
		35					40					45				
Asn	Arg	Leu	Tyr	Trp	Tyr	Arg	Gln	Thr	Leu	Gly	Gln	Gly	Pro	Glu	Phe	
	50					55					60					
Leu	Thr	Tyr	Phe	Gln	Asn	Glu	Ala	Gln	Leu	Glu	Lys	Ser	Arg	Leu	Leu	
65					70					75					80	
Ser	Asp	Arg	Phe	Ser	Ala	Glu	Arg	Pro	Lys	Gly	Ser	Phe	Ser	Thr	Leu	
				85					90					95		
Glu	Ile	Gln	Arg	Thr	Glu	Gln	Gly	Asp	Ser	Ala	Met	Tyr	Leu	Cys	Ala	
		100						105					110			
Ser	Ser	Pro	Gly	Thr	Ser	Tyr	Glu	Gln	Tyr	Phe	Gly	Pro	Gly	Thr	Arg	
		115					120					125				
Leu	Thr	Val	Thr	Glu	Asp	Leu	Lys	Asn	Val	Phe	Pro	Pro	Glu	Val	Ala	
	130					135					140					
Val	Phe	Glu	Pro	Ser	Glu	Ala	Glu	Ile	Ser	His	Thr	Gln	Lys	Ala	Thr	
145					150					155					160	
Leu	Val	Cys	Leu	Ala	Thr	Gly	Phe	Tyr	Pro	Asp	His	Val	Glu	Leu	Ser	
			165						170					175		
Trp	Trp	Val	Asn	Gly	Lys	Glu	Val	His	Ser	Gly	Val	Ser	Thr	Asp	Pro	
		180						185					190			
Gln	Pro	Leu	Lys	Glu	Gln	Pro	Ala	Leu	Asn	Asp	Ser	Arg	Tyr	Cys	Leu	
	195						200					205				
Ser	Ser	Arg	Leu	Arg	Val	Ser	Ala	Thr	Phe	Trp	Gln	Asn	Pro	Arg	Asn	
	210					215					220					
His	Phe	Arg	Cys	Gln	Val	Gln	Phe	Tyr	Gly	Leu	Ser	Glu	Asn	Asp	Glu	
225				230					235					240		
Trp	Thr	Gln	Asp	Arg	Ala	Lys	Pro	Val	Thr	Gln	Ile	Val	Ser	Ala	Glu	
			245						250					255		
Ala	Trp	Gly	Arg	Ala	Asp	Cys	Gly	Phe	Thr	Ser	Glu	Ser	Tyr	Gln	Gln	
		260						265					270			

Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala
275 280 285

Thr Leu Tyr Ala Val Leu Val Ser Ala Leu Val Leu Met Ala Met Val
290 295 300

Lys Arg Lys Asp Ser Arg Gly
305 310

<210> 26
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 26
aaatgataac catctcgc 18

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 27
tttactgttt tcgtaacagt ttg 24

<210> 28
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 28
ttggagggcg ttatccacct tc 22

<210> 29
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 29

ctgtaaatca acaacgcaca g 21

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 30
caacaacgca cagaatctag 20

<210> 31
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 31
gggaccttta attcaaccga acac 24

<210> 32
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 32
aaacgcgttg gagtcttg tg 23

<210> 33
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 33
ggaagtagtc cttgaccagg cag 23

<210> 34
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

 <400> 34
 ctgagttcca cgacaccgtc ac 22

 <210> 35
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 35
 tagagtcttg aggactgtag gac 23

 <210> 36
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 36
 ggtcgttaac aatggggaag ctg 23

 <210> 37
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 37
 tttactgttt tcgtaacagt ttg 24

 <210> 38
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 38
 ggtcgttaac aatggggaag ctg 23

<210> 39
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 39
gaagtcactt atgagacaca ccag

24

<210> 40

<400> 40
000

<210> 41
<211> 9182
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Plasmid pTRABac/9F12
DNA sequence

<400> 41
gcagttcggtt gacgccttcc tccgtgtggc cgaacacgtc gagcgggtgg tcgatgacca 60
gcggcgtgccc gcacgcgacg cacaagtatc tgtacaccga atgatcgctg ggccaaggca 120
cgtcggcctc caagtggcaa tattggcaaa ttcgaaaata tatacagttg ggttggttgc 180
gcatatctat cgtggcgttg ggcattgtac tccgaacgtt gatttgcatt caagccgaaa 240
ttaaatcatt gcgattagtgc cgattaaaac gttgtacatc ctgcgtttta atcatgccgt 300
cgattaaatc gcgcaatcga gtcaagtgtg caaagtgtgg aataatgttt tctttgtatt 360
cccagatcaa gcgcagcgcg tatgtatagag atcaataaaa gcgcgaatta aatagcttgc 420
aatgcaactt tatccaataa tatattatgt atcgcacgtc aagaattaac aatgcgccc 480
ttgtcgcacg tcaacacgac tatgatagag atcaataaaa gcgcgaatta aatagcttgc 540
gacgcaacgt gcacgatctg tgcacgcgtt ccggcacgag ctttgattgt aataagtttt 600
tacgaagcga tgacatgacc ccgtagtga caacgatcac gcccaaaaaga actgccgact 660
acaaaattac cgagtatgtc ggtgacgtta aaactattaa gccatccaat cgaccgttag 720
tcgaatcagg accgctggtg cgagaagccg cgaagtatgg cgaatgcac gtataacgtg 780
tgaggtccgc tcattagagc gtcattgtta gacaagaaag ctacatattt aattgatccc 840
gatgatttta ttgataaatt gaccctaact ccatacacgg tattctacaa tggcgggggt 900
ttggtcaaaa tttccggact gcgattgtac atgctgttaa cggctccgcc cactattaat 960
gaaattaaaa attccaattt taaaaaacgc agcaagagaa acatttgtat gaaagaatgc 1020
gtagaaggaa agaaaaatgt cgtcgacatg ctgaacaaca agattaatat gcctccgtgt 1080
ataaaaaaaaa tattgaacga tttgaaagaa aacaatgtac cgcgcggcgg tatgtacagg 1140
aagaggttta tactaaactg ttacattgca aacgtggttt cgtgtgcca gtgtgaaaac 1200
cgatgtttta tcaaggctct gacgcatttc tacaaccacg actccaagtg tgtgggtgaa 1260
gtcatgcatc ttttaaatca atcccaagat gtgtataaac caccaaactg ccaaaaaatg 1320
aaaactgtcg acaagctctg tccgtttgtt ggcaactgca agggctctca tcctatttgt 1380
aattattgaa taataaaaaca attataaatg ctaaaattgt tttttattaa cgatacaaac 1440
caaacgcaac aagaacattt gtagtattat ctataattga aaacgcgtag ttataatcgc 1500
tgaggttaata tttaaaatca ttttcaaagt attcacagt aatttgcgac aatataattt 1560

tatttttcaca	taaactagac	gccttgctgt	cttcttcttc	gtattccttc	tctttttcat	1620
ttttctcctc	ataaaaaatta	acatagttat	tatcgtatcc	atatatgtat	ctatcgtata	1680
gagtaaat	tttgttgtca	taaatatata	tgtctttttt	aatggggtgt	atagtaccgc	1740
tgcgcatagt	ttttctgtaa	tttacaacag	tgctattttc	tggtagtctc	tcggagtgtg	1800
ttgctttaat	tattaaat	atataatcaa	tgaatttggg	atcgctcggt	ttgtacaata	1860
tggtgcgggc	atagtacgca	gcttcttcta	gttcaattac	accatttttt	agcagcaccg	1920
gattaacata	actttccaaa	atgttgtacg	aaccgttaaa	caaaaacagt	tcacctccct	1980
tttctatact	attgtctgcg	agcagttgtt	tggtgttaaa	aataacagcc	attgtaatga	2040
gacgcacaaa	ctaatatcac	aaactggaaa	tgtctatcaa	tatatagtgt	ctgatatctc	2100
cccagcatgc	ctgctattgt	cttcccaatc	ctcccccttg	ctgtcctgcc	ccacccacc	2160
ccccagaata	gaatgacacc	tactcagaca	atgcgatgca	atttcctcat	tttattagga	2220
aaggacagtg	ggagtggcac	cttccaggg	caaggaaggc	acgggggagg	ggcaaacaac	2280
agatggctgg	caactagaag	gcacagtcga	ggctgatcag	cgagctctag	tctagactat	2340
tatttaccgg	gagacaggga	gaggctcttc	tgctgttagt	ggttgtgcag	agcctcatgc	2400
atcacggagc	atgagaagac	gttccccctgc	tgccacctgc	tcttgtccac	ggtgagcttg	2460
ctgtagagga	agaaggagcc	gtcggagtcc	agcacgggag	gcgtggctct	gtagttgttc	2520
tccggctgcc	cattgctctc	ccactccacg	gcgatgtcgc	tgggataгаа	gcctttgacc	2580
aggcaggtca	ggctgacctg	gttcttggct	agctcatccc	gggatggggg	caggggtgac	2640
acctgtgggt	ctcggggctg	cccttggct	ttggagatgg	tttctcgcg	gggggctggg	2700
agggtcttgt	tggagacctt	gcacttgtac	tccttgccat	tcagccagtc	ctgggtgcagg	2760
acggtgagga	cgctgaccac	acggtacgtg	ctgttgtact	gctcctccc	cggctttgtc	2820
ttggcattat	gcacctccac	gccgtccacg	taccagttga	acttgacctc	agggctctcg	2880
tggctcacgt	ccaccaccac	gcagtgtacc	tcaggggtcc	gggagatcat	gaggggtgtcc	2940
ttgggttttg	gggggaagag	gaagactgac	gggtccccca	ggagttcagg	tgccgggtggg	3000
catgtgtgag	ttttgtcaca	agatttgggc	tcaactttct	tgtccacctt	ggtgttgctg	3060
ggcttgtgat	tcacgttgca	gatgtaggtc	tgggtgccca	agctgctgga	gggcacggtc	3120
accacgctgc	tgagggagta	gagtcctgag	gactgtagga	cagccgggaa	ggtgtgcacg	3180
ccgctggtca	gggcgcctga	gttccacgac	accgtcaccg	gttcggggaa	gtagtccttg	3240
accaggcagc	ccagggccgc	tgtgccccca	gaggtgctct	tggaggaggg	tgccaggggg	3300
aagaccgatg	ggcccttgg	ggaggctgag	gagacgggtga	ccaggggtcc	ctggccccag	3360
gagtcaaagt	agtagtgggc	cagccactgt	tttcccgtt	tcgcacagta	ataaacggcc	3420
gtgtcctcgg	ctctcaggct	gttcaagtgc	agatatagcg	tggtcatgga	attgtctctg	3480
gagatggtca	atcgcccgct	cacggagtct	gcataatatg	tggtagtctc	tctagacta	3540
atagccgcga	cccactccag	ccccatccct	ggagcctggc	ggaccagct	catggcatag	3600
ctgctaaagc	tgaatccaga	ggctgcacag	gagagtctca	cggaccccc	aggctgtacc	3660
aagcctcccc	cagactgcac	cagctgcacc	tcgtccgcct	agatgtaaga	aatgtacacg	3720
accataaaaa	ctagtgaac	gttgactaag	aaattcatgc	ggccgcgtac	gattgtaaat	3780
aaaatgtaat	ttacagtata	gtattttaat	taatatataa	atgatttgat	aataattctt	3840
atttaactat	aatatattgt	gttgggttga	attaaaggct	ccggcatcct	caaatgcata	3900
atatcatagt	cccccttgtt	gtaagtgtatg	cgtatttctg	aatctttgtg	aaatagcaca	3960
caggactcca	acgcgttttg	cgttttat	tcttgctcga	ggatatcatg	gagataatta	4020
aaatgataac	catctcgcaa	ataaataagt	attttactgt	tttcgtaaca	gttttgtaat	4080
aaaaaaacct	ataaatattc	cggattattc	ataccgtccc	accatcgggc	gtgctagcgg	4140
atccatgggtg	ggacctgca	tgtgtgtgt	gctgtgtgtg	ctaggcctga	ggctacagct	4200
ctccctgggc	atcgacatcc	agatgaccca	gtctccatcc	tccctgtctg	catctgtagg	4260
agacagagtc	atcatcactt	gccgggcaag	tcagagtatt	agcacctatt	taaattggta	4320
tcagcagaaa	ccagggaaag	cccctaaact	cctgatctat	tatgcaacca	atttgcaaag	4380
tgggggtccca	tcaaggttca	gtggcagtg	atctgggaca	gatttcactc	tcaccatcag	4440
cagtctgcaa	cctgaagatt	ttgcgactta	ttattgtcaa	cagagttcca	acaccgtcac	4500
tttcggccct	gggaccaaa	tggatatgaa	gactgtggct	gcaccaagt	tcttcatctt	4560
cccgccatct	gatgagcagt	tgaaatctgg	aactgcctct	gttgtgtgcc	tgctgaataa	4620
cttctatccc	agagaggcca	aagtacagt	gaagggtgg	aacgccctcc	aatcgggtaa	4680
ctcccaggag	agtgtcacag	agcaggacag	caaggacagc	acctacagcc	tcagcagcac	4740
cctgacgctg	agcaaagcag	actacgagaa	acacaaagtc	tacgcctgcg	aagtcaccca	4800
tcagggcctg	agctcgcccc	tcacaaagag	cttcaacagg	ggagagtgtt	aatagaagct	4860

tgctggttga	tggaaaggaa	aagagttcta	cagggaaact	tggacccgct	tcatggaaga	4920
cagcttcccc	attgttaacg	accaagaagt	gatggatggt	ttccttggtg	tcaacatgcg	4980
ttccactaga	cccaaccgtt	gttacaaatt	cctggcccaa	cacgctctgc	gttgcgaccc	5040
cgactatgta	cctcatgacg	tgattaggat	cgtcgagcct	tcatgggtgg	gcagcaacaa	5100
cgagtaccgc	atcagcctgg	ctaagaaggg	cggcggctgc	ccaataatga	accttcactc	5160
tgagtacacc	aactcgttcg	aacagttcat	cgatcggtgc	atctgggaga	acttctacaa	5220
gcccacgtt	tacatcggtg	ccgactctgc	tgaagaggag	gaaattctcc	ttgaagtttc	5280
cctgggtgtc	aaagtaaagg	agtttgcacc	agacgcacct	ctgttctactg	gtccggcgta	5340
ttaaaacacg	atacattggt	attagtacat	ttattaagcg	ctagattctg	tgcgttggtg	5400
atttacagac	aattgttgta	cgtattttta	taattcatta	aattttataat	ctttagggtg	5460
gtatgttaga	gcgaaaatca	aatgattttc	agcgtcttta	tatctgaatt	taaatattaa	5520
atcctcaata	gatttgtaaa	ataggtttcg	attagtttca	aacaagggtt	gtttttccga	5580
accgatggct	ggactatcta	atggattttc	gctcaacgcc	acaaaacttg	ccaaatcttg	5640
tagcagcaat	ctagctttgt	cgatattcgt	ttgtgttttg	ttttgtaata	aagggttcgac	5700
gtcgttcaaa	atattatgcg	cttttgtatt	tctttcatca	ctgtcgtag	tgtacaattg	5760
actcgacgta	aacacgttaa	ataaagctag	cttgacata	tttaacatcg	ggcgtgttag	5820
ctttattagg	ccgattatcg	tcgtcgctcc	aacctcgctc	gttagaagtt	gcttccgaag	5880
acgattttgc	ctagccaca	cgacgcctat	taattgtgtc	ggctaacacg	tccgcgatca	5940
aattttagtg	tgagcttttt	ggaattattt	ctgattgcgg	gcgttttttg	gcgggtttca	6000
atctaactgt	gcccgatttt	aattcagaca	acacgttaga	aagcgatggt	gcaggcggtg	6060
gtaacatttc	agacggcaaa	tctactaatg	gcggcggtgg	tggagctgat	gataaatcta	6120
ccatcggtgg	aggcgcaggc	ggggctggcg	gcggaggcgg	aggcggaggt	ggtggcggtg	6180
atgcagacgg	cggtttaggc	tcaaattgtc	ctttaggcaa	cacagtcggc	acctcaacta	6240
ttgtactggt	ttcgggcgcc	gtttttggtt	tgaccggtct	gagacgagtg	cgattttttt	6300
cgtttcta	agcttccaac	aattgttgct	tgctgtctaa	aggtgcagcg	ggttgaggtt	6360
ccgtcggcat	tggtggagcg	ggcggcaatt	cagacatcga	tggtggtggt	ggtggtggag	6420
gcgctggaat	gttaggcacg	ggagaagggt	gtggcggcgg	tgccgccggt	ataatttggt	6480
ctggtttagt	ttgttcgcgc	acgattgtgg	gcaccggcgc	aggcgccgct	ggctgcacaa	6540
cggaagggtc	tctgcttcga	ggcagcgctt	gggggtggtg	caattcaata	ttataattgg	6600
aatacaaatc	gtaaaaatct	gctataagca	ttgtaatttc	gctatcgttt	accgtgccga	6660
tatttaacaa	ccgctcaatg	taagcaattg	tattgtaaag	agattgtctc	aagctccgca	6720
cgccgataac	aagccttttc	atttttacta	cagcattgta	gtggcgagac	acttcgctgt	6780
cgtcgactcg	agttctatag	tgtcaccta	atcgtatgtg	tatgatacat	aaggttatgt	6840
attaattgta	gccgcgttct	aacgacaata	tgtccatag	gtgcactctc	agtacaatct	6900
gctctgatgc	cgcatagtta	agccagcccc	gacaccgcc	aacaccgct	gacgcgccct	6960
gacgggcttg	tctgtcccc	gcatcgctt	acagacaagc	tgtgaccgtc	tccgggagct	7020
gcatgtgtca	gaggttttca	ccgtcatcac	cgaaaacgcg	gagaggaaag	ggcctcgta	7080
tacgcctatt	tttatagggt	taataatggt	taataatggt	ttcttagacg	tcaggtggca	7140
cttttcgggg	aaatgtgcgc	ggaaccccta	tttgtttatt	tttctaaata	cattcaata	7200
tgtatccgct	catgagacaa	taaccctgat	aaatgcttca	ataatattga	aaaaggaaga	7260
gtatgagtat	tcaacatttc	cgtgtcgccc	ttattccctt	ttttgcggca	ttttgccttc	7320
ctgtttttgc	tcaccagaa	acgctggtga	aagtaaaaga	tgctgaagat	cagttgggtg	7380
cacgagtggg	ttacatcgaa	ctggatctca	acagcggtaa	gatccttgag	agttttcgcc	7440
ccgaagaacg	ttttccaatg	atgagcactt	ttaaagtctt	gctatgtggc	gcggtattat	7500
cccgtattga	cgccgggcaa	gagcaactcg	gtcgccgcat	acactattct	cagaatgact	7560
tggttgagta	ctcaccagtc	acagaaaagc	atcttacgga	tggcatgaca	gtaagagaat	7620
tatgcagtgc	tgccataacc	atgagtata	acactgcggc	caacttactt	ctgacaacga	7680
tcggaggacc	gaaggagcta	accgcttttt	tgcacaacat	gggggatcat	gtaactcgcc	7740
ttgatcggtg	ggaaccggag	ctgaatgaag	ccataccaaa	cgacgagcgt	gacaccacga	7800
tgctgtagc	aatggcaaca	acgttgcgca	aactattaac	tggcgaacta	cttactctag	7860
cttcccggca	acaattaata	gactggatgg	aggcggataa	agttgcagga	ccacttctgc	7920
gctcgccct	tccggctggc	tggtttattg	ctgataaatc	tggagccggt	gagcgtgggt	7980
ctcgcggtat	cattgcagca	ctggggccag	atggttaagc	ctcccgtatc	gtagtattct	8040
acacgacggg	gagtcaggca	actatggatg	aacgaaatag	acagatcgct	gagataggtg	8100
cctcactgat	taagcattgg	taactgtcag	accaagttta	ctcatatata	ctttagattg	8160

atttaaaact	tcatttttta	tttaaaagga	tctaggtgaa	gatccttttt	gataatctca	8220
tgacccaaat	cccttaacgt	gagtttttcgt	tccactgagc	gtcagacccc	gtagaaaaga	8280
tcaaaggatc	ttcttgagat	ccttttttttc	tgcgcgtaat	ctgctgcttg	caaacaaaaa	8340
aaccaccgct	accagcgggtg	gtttgttttcg	cggatcaaga	gctaccaact	ctttttccga	8400
aggtaactgg	cttcagcaga	gcgcagatac	caaatactgt	ccttctagt	tagccgtagt	8460
taggccacca	cttcaagaac	tctgtagcac	cgcctacata	cctcgctctg	ctaatacctgt	8520
taccagtggc	tgctgccagt	ggcgataagt	cgtgtcttac	cgggttgac	tcaagacgat	8580
agttaccgga	taaggcgcag	cggtcgggct	gaacgggggg	ttcgtgcaca	cagcccagct	8640
tggagcgaac	gacctacacc	gaactgagat	acctacagcg	tgagcattga	gaaagcgcca	8700
cgcttcccga	agggagaaaag	gcggacaggt	atccggtaag	cggcaggggtc	ggaacaggag	8760
agcgcacgag	ggagcttcca	gggggaaacg	cctggtatct	ttatagtcct	gtcgggtttc	8820
gccacctctg	acttgagcgt	cgatttttgt	gatgctcgtc	agggggggcgg	agcctatgga	8880
aaaacgccag	caacgcggcc	tttttacggt	tcctggcctt	ttgctggcct	tttgctcaca	8940
tgttctttcc	tgcgttatcc	cctgattctg	tggataaccg	tattaccgcc	tttgagttag	9000
ctgataccgc	tcgccgcagc	cgaacgaccg	agcgcagcga	gtcagtgagc	gaggaagcgg	9060
aagagcgcgc	aatacgcaaa	ccgcctctcc	ccgcgcgttg	gccgattcat	taatgcaggt	9120
taacctggct	tatcgaaatt	aatacgactc	actatagggg	gaccggcaga	tcgatctgtc	9180
ga						9182

<210> 42

<211> 8435

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: pTRABacHuLCHC1
DNA sequence

<400> 42

gcagttcggt	gacgccttcc	tcctgtgtggc	cgaacacgtc	gagcgggtgg	tcgatgacca	60
gcggcgtgcc	gcacgcgacg	cacaagtatc	tgtacaccga	atgatcgtcg	ggcgaaggca	120
cgtcggcctc	caagtggcaa	tattggcaaa	ttcgaaaata	tatacagttg	ggttgtttgc	180
gcatactctat	cgtggcggtg	ggcatgtacg	tccgaacggt	gatttgcatg	caagccgaaa	240
ttaaatcatt	gcgattagt	cgattaaaac	gttgtagatc	ctcgctttta	atcatgccgt	300
cgattaaatc	gcgcaatcga	gtcaagtgat	caaagtgtgg	aataatgttt	tcctttgtatt	360
cccgaagtcaa	gcgcagcgcg	tattttaaca	aactagccat	cttgtaagtt	agtttcattt	420
aatgcaactt	tatccaataa	tatatattgt	atcgcagctc	aagaattaac	aatgcgccc	480
ttgtcgcatac	tcaacacgac	tatgatagag	atcaaatata	gcgcgaatta	aatagcttgc	540
gacgcaacgt	gcacgatctg	tgacgcggtt	ccggcacgag	ctttgattgt	aataagtttt	600
tacgaagcga	tgacatgacc	cccgtagtga	caacgatcac	gccccaaaaga	actgccgact	660
acaaaattac	cgagtatgtc	ggtgacgtta	aaactattaa	gccatccaat	cgaccgttag	720
tcgaatcagg	accgctgggtg	cgagaagccg	cgaagtatgg	cgaatgcatac	gtataacgtg	780
tggagtccgc	tcattagagc	gtcatgttta	gacaagaaaag	ctacatatatt	aattgatccc	840
gatgattttta	ttgataaatt	gaccctaact	ccatacacgg	tattctacaa	tggcgggggtt	900
ttggtcaaaa	tttccggact	gcgattgtac	atgctgttaa	cggctccgcc	cactattaat	960
gaaattaaaa	attccaattt	taaaaaacgc	agcaagagaa	acatttgtat	gaaagaatgc	1020
gtagaaggaa	agaaaaatgt	cgtcgacatg	ctgaacaaca	agattaatat	gcctccgtgt	1080
ataaaaaaaaa	tattgaacga	tttgaaagaa	aacaatgtac	cgcgcgggcgg	tatgtacagg	1140
aagaggttta	tactaaactg	ttacattgca	aacgtggttt	cgtgtgccaa	gtgtgaaaac	1200
cgatgtttta	tcaaggctct	gacgcatttc	tacaaccacg	actccaagt	tgtgggtgaa	1260
gtcatgcatac	ttttaatcaa	atcccaagat	gtgtataaac	caccaaactg	ccaaaaaatg	1320
aaaactgtcg	acaagctctg	tcggtttgct	ggcaactgca	agggctctcaa	tcctatttgt	1380
aattattgaa	taataaaaaca	attataaatg	ctaaatttgt	tttttattaa	cgatacaaac	1440
caaacgcaac	aagaacattt	gtagtattat	ctataattga	aaacgcgtag	ttataatcgc	1500

tgaggtaata	tttaaaatca	ttttcaaagt	attcacagtt	aatttgcgac	aatataat	1560
tattttcaca	taaactagac	gccttgctgt	cttcttcttc	gtattccttc	tctttttcat	1620
ttttctcctc	ataaaaatta	acatagttat	tatcgtatcc	atataatgtat	ctatcgtata	1680
gagtaaattt	tttgttgtca	taaatatata	tgtctttttt	aatggggtgt	atagtaccgc	1740
tgcgcatagt	ttttctgtaa	tttacaacag	tgctattttc	tggtagtctt	tcggagtgtg	1800
ttgctttaat	tattaaat	atataatcaa	tgaatttggg	atcgtcgggt	ttgtacaata	1860
tgttgccggc	atagtacgca	gcttcttcta	gttcaattac	accatttttt	agcagcaccg	1920
gattaacata	actttccaaa	atgttgtacg	aaccgttaaa	caaaaacagt	tcacctccct	1980
tttctatact	attgtctgcg	agcagttggt	tggtgttaaa	aataacagcc	attgtaatga	2040
gacgcacaaa	ctaatatcac	aaactggaaa	tgtctatcaa	tatatagttg	ctgatatctc	2100
cccagcatgc	ctgctattgt	cttcccaatc	ctcccccttg	ctgtcctgcc	ccacccacc	2160
ccccagaata	gaatgacacc	tactcagaca	atgcgatgca	atttccctcat	tttattagga	2220
aaggacagt	ggagtggcac	cttccaggg	caaggaaggc	acgggggagg	ggcaaacaac	2280
agatggctgg	caactagaag	gcacagtcga	ggctgatcag	cgagctctag	tctagactat	2340
tatttaccgc	gagacaggg	gaggctcttc	tgctgttagt	ggttgtgcag	agcctcatgc	2400
atcacggagc	atgagaagac	gttccccctgc	tgccacctgc	tcttgtccac	ggtgagcttg	2460
ctgtagagga	agaaggagcc	gtcggagtcc	agcacgggag	gcgtggtctt	gtagttgttc	2520
tccggctgccc	cattgctctc	ccactccacg	gcgatgtcgc	tgggatagaa	gcctttgacc	2580
aggcaggtca	ggctgacctg	gttcttggtc	agctcacccc	gggatggggg	caggggtgtac	2640
acctgtgggt	ctcggggctg	ccctttggct	ttggagatgg	ttttctcgat	gggggctggg	2700
agggctttgt	tggagacctt	gcacttgtac	tccttgccat	tcagccagtc	ctgggtgcagg	2760
acgggtgagga	cgctgaccac	acgggtacgtg	ctgttgtact	gctcctcccg	cggctttgtc	2820
ttggcattat	gcacctccac	gccgtccacg	taccagttga	acttgacctc	agggctcttcg	2880
tggctcacgt	ccaccaccac	gcatgtgacc	tcaggggtcc	gggagatcat	gaggggtgtcc	2940
ttgggttttg	gggggaagag	gaagactgac	gggtccccca	ggagttcagg	tgctgggcac	3000
ggtgggcatg	tgtgagtttt	gtcacaagat	ttgggtcaa	ctttcttgtc	caccttggtg	3060
ttgctgggct	tgtgattcac	gttgcagatg	taggtctggg	tgcccaagct	gctggagggc	3120
acggtcacca	cgctgctgag	ggagtagagt	cctgaggact	gtaggacagc	cggaagggtg	3180
tgacgcgcgc	tggtcagggc	gcctgagttc	cacgacaccg	tcaccgggtc	ggggaagtag	3240
tccttgacca	ggcagcccag	ggccgctgtg	ccccagagg	tgctcttgga	ggaggggtgcc	3300
agggggaaga	ccgatgggccc	cttatcaaac	tagtgcaacg	ttgactaaga	atttcatgcg	3360
gccgcgtacg	attgtaaata	aaatgtaatt	tacagtatag	tattttaatt	aatatacaaaa	3420
tgatttgata	ataattctta	tttaactata	atataattgtg	ttgggttgaa	ttaaagggtcc	3480
cggcatcctc	aaatgcataa	tatcatagtc	ccccttggtg	taagtgatgc	gtatttctga	3540
atctttgtaa	aatagcacac	aggactccaa	cgcggttggc	gttttatttt	cttgtctgag	3600
gatatcatgg	agataattaa	aatgataacc	atctcgcaaa	taaataagta	ttttactgtt	3660
ttcgtaacag	ttttgtaata	aaaaaaccta	taaatattcc	ggattattca	taccgtccca	3720
ccatcgggcg	tgtacgcgga	tccatgggtg	gacctgtcat	gctgctgctg	ctgctgattc	3780
taggcctttg	ataacaccaa	gtgtcttcat	cttcccgcga	tctgatgagc	agttgaaatc	3840
tggaaactgcc	tctgttgtgt	gcctgctgaa	taacttctat	cccagagagg	ccaaagtaca	3900
gtggaagggtg	gataacgccc	tccaatcggg	taactcccag	gagagtgtca	cagagcagga	3960
cagcaaggac	agcacctaca	gcctcagcag	caccctgacg	ctgagcaaag	cagactacga	4020
gaaacacaaa	gtctacgcct	gcgaagtcac	ccatcagggc	ctgagctcgc	ccgtcacaaa	4080
gagcttcaac	aggggagagt	gttaatagaa	gcttgtcgtt	ggatggaaag	gaaaagagtt	4140
ctacagggaa	acttggaccc	gcttcatgga	agacagcttc	cccattgtta	acgaccaaga	4200
agtgatggat	gttttccttg	ttgtcaacat	gcgtccact	agacccaacc	gttggtacaa	4260
attcctggcc	caacacgctc	tgcgttgcca	ccccgactat	gtacctcatg	acgtgattag	4320
gatcgtcgag	ccttcatggg	tgggcagcaa	caacgagtac	cgcatcagcc	tggctaagaa	4380
gggcggcgcc	tgcccaataa	tgaaccttca	ctctgagtac	accaactcgt	tcgaacagtt	4440
catcgatcgt	gtcatctggg	agaacttcta	caagcccatc	gtttacatcg	gtaccgactc	4500
tgctgaagag	gaggaaattc	tccttgaagt	ttccctgggtg	ttcaaagtaa	aggagtttgc	4560
accagacgca	cctctgttca	ctgggtccggc	gtattaaaac	acgatacatt	gttattagta	4620
catttattaa	gcgctagatt	ctgtgcgttg	ttgatttaca	gacaattgtt	gtacgtat	4680
taataattca	ttaaatttat	aatctttagg	gtggatgtgt	agagcgaaaa	tcaaagtatt	4740
ttcagcgtct	ttatatctga	atttaaatat	taaatcctca	atagatttgt	aaaataggtt	4800

tcgattagtt	tcaaacaagg	gttggtttttc	cgaaccgatg	gctggactat	ctaattggatt	4860
ttcgctcaac	gccacaaaac	ttgccaaatc	ttgtagcagc	aatctagctt	tgtcgatatt	4920
cgtttgtgtt	ttgttttgta	ataaagggttc	gacgtcgttc	aaaatattat	gcgcttttgt	4980
atctctttca	tcactgtcgt	tagtgtacaa	ttgactcgac	gtaaacacgt	taaataaagc	5040
tagcttggac	atatttaaca	tcgggcgtgt	tagctttatt	aggccgatta	tcgtcgctcg	5100
cccaaccctc	gtcgttagaa	gttgcttccg	aagacgattt	tgccatagcc	acacgacgcc	5160
tattaattgt	gtcggctaac	acgtccgcga	tcaaatttgt	agttgagctt	tttggaatta	5220
tttctgattg	cgggcgtttt	tgggcgggtt	tcaatctaac	tgtgcccgat	tttaattcag	5280
acaacacggt	agaaagcgat	ggtgcaggcg	gtggtaacat	ttcagacggc	aaatctacta	5340
atggcggcgg	tgggtggagct	gatgataaat	ctaccatcgg	tggaggcgca	ggcggggctg	5400
gcggcggagg	cggaggcgga	ggtggtggcg	gtgatgcaga	cggcggttta	ggctcaaattg	5460
tctcttttag	caacacagtc	ggcacctcaa	ctattgtact	ggtttcgggc	gccgtttttg	5520
gtttgaccgg	tctgagacga	gtgcgatttt	tttcgtttct	aatagcttcc	aacaatttgt	5580
gtctgtcgtc	taaagggtgca	gcgggttgag	gttcgcgtcg	cattggtgga	gcgggcggca	5640
attcagacat	cgatggtggt	ggtggtggtg	gaggcgctgg	aatggttaggc	acgggagaag	5700
gtggtggcgg	cggtgccgcc	ggtataattt	gttctgggtt	agtttggttcg	cgcacgattg	5760
tgggcaccgg	cgcaggcgcc	gctggctgca	caacggaagg	tcgtctgctt	cgaggcagcg	5820
cttgggtggg	tggcaattca	atattataat	tggataacaa	atcgtaaaaa	tctgctataa	5880
gcattgtaat	ttcgctatcg	tttaccgtgc	cgatatatta	caaccgctca	atgtaaagca	5940
ttgtattgta	aagagattgt	ctcaagctcc	gcacgcgat	aacaagcctt	ttcattttta	6000
ctacagcatt	gtagtggcga	gacacttcgc	tgtcgtcgac	tcgagttcta	tagtgtcacc	6060
taaatcgat	gtgtatgata	cataaggtta	tgtattaatt	gtagccgcgt	tctaacgaca	6120
atatgtccat	atggtgcact	ctcagtacaa	tctgctctga	tgccgcatag	ttaagccagc	6180
cccgcacccc	gccaacaccc	gctgacgcgc	cctgacgggc	ttgtctgctc	ccggcatccg	6240
cttacagaca	agctgtgacc	gtctccggga	gctgcatgtg	tcagagggtt	tcaccgtcat	6300
caccgaaacg	cgcgagagga	aagggcctcg	tgatacgctt	atTTTTatag	gttaatgtca	6360
tgataataat	ggtttcttag	acgtcagggtg	gcacttttcg	gggaaatgtg	cgcggaaccc	6420
ctatttggtt	atTTTTctaa	atacattcaa	atatgtatcc	gctcatgaga	caataaccct	6480
gataaatgct	tcaataatat	tgaaaaagga	agagtatgag	tattcaacat	ttccgtgtcg	6540
cccttattcc	ctTTTTtgcg	gcattttgcc	ttcctgtttt	tgctcaccca	gaaacgctgg	6600
tgaagtaaa	agatgctgaa	gatcagttgg	gtgcacgagt	gggttacatc	gaactggatc	6660
tcaacagcgg	taagatcctt	gagagttttc	gccccgaaga	acgttttcca	atgatgagca	6720
cttttaaagt	tctgctatgt	ggcgcggtat	tatcccgtat	tgacgcgggg	caagagcaac	6780
tcggtcgccg	catacactat	tctcagaatg	acttggttga	gtactacca	gtcacagaaa	6840
agcatcttac	ggatggcatg	acagtaagag	aattatgcag	tgctgccata	accatgagtg	6900
ataacactgc	ggccaactta	cttctgacaa	cgatcggagg	accgaaggag	ctaaccgctt	6960
ttttgcacaa	catgggggat	catgtaactc	gccttgatcg	ttgggaaccg	gagctgaatg	7020
aagccatacc	aaacgacgag	cgtgacacca	cgatgcctgt	agcaatggca	acaacgttgc	7080
gcaaaactatt	aactggcgaa	ctacttactc	tagcttcccg	gcaacaatta	atagactgga	7140
tggaggcgga	taaagttgca	ggaccacttc	tgcgctcggc	ccttcgggct	ggctggttta	7200
ttgctgataa	atctggagcc	ggtgagcgtg	ggtctcgcg	tatcattgca	gcactggggc	7260
cagatggtaa	gccctcccgt	atcgtagtta	tctacacgac	ggggagtcag	gcaactatgg	7320
atgaacgaaa	tagacagatc	gctgagatag	gtgcctcact	gattaagcat	tggtaactgt	7380
cagaccaagt	ttactcatat	atactttaga	ttgattttaa	acttcatttt	taatttaaaa	7440
ggatctaggt	gaagatcctt	tttgataatc	tcatgaccaa	aatcccttaa	cgtgagtttt	7500
cgttccactg	agcgtcagac	cccgtagaaa	agatcaaagg	atcttcttga	gatccttttt	7560
ttctgcgcgt	aatctgctgc	ttgcaaacaa	aaaaaccacc	gctaccagcg	gtggtttgtt	7620
tgccggatca	agagctacca	actctttttc	cgaaggtaac	tggcttcagc	agagcgcaga	7680
taccaaatac	tgctccttcta	gtgtagccgt	agttaggcca	ccacttcaag	aactctgtag	7740
caccgcctac	atacctcgct	ctgctaattc	tgttaccagt	ggctgctgcc	agtggcgata	7800
agtcgtgtct	taccgggttg	gactcaagac	gatagttacc	ggataaggcg	cagcggtcgg	7860
gctgaacggg	gggttcgtgc	acacagccca	gcttggagcg	aacgacctac	accgaactga	7920
gatacctaca	gcgtgagcat	tgagaaaagc	ccacgcttcc	cgaagggaga	aaggcggaca	7980
ggtatccggt	aagcggcagg	gtcggaaacg	gagagcgcac	gagggagctt	ccagggggaa	8040
acgcctggta	tctttatagt	cctgtcgggt	ttcgcacct	ctgacttgag	cgtcgatttt	8100

tgtgatgctc	gtcagggggg	cggagcctat	ggaaaaacgc	cagcaacgcg	gcctttttac	8160
ggttcctggc	cttttgctgg	ccttttgctc	acatgttctt	tcctgcgtta	tcccctgatt	8220
ctgtggataa	ccgtattacc	gcctttgagt	gagctgatac	cgctcgccgc	agccgaacga	8280
ccgagcgcag	cgagtcagt	agcgaggaag	cggagagcgc	cccaatacgc	aaaccgcctc	8340
tccccgcgcg	ttggccgatt	cattaatgca	ggttaacctg	gcttatcgaa	attaatacga	8400
ctcactatag	ggagaccggc	agatcgatct	gtcga			8435

<210> 43

<211> 8429

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: pTRABacHuLCHC1

DNA sequence

<400> 43

gcagttcgtt	gacgccttcc	tccgtgtggc	cgaacacgtc	gagcgggtgg	tcgatgacca	60
gcggcgtgcc	gcacgcgacg	cacaagtatc	tgtacaccga	atgatcgctc	ggcgaaggca	120
cgtcggcctc	caagtggcaa	tattggcaaa	ttcgaataa	tatacagttg	ggttgtttgc	180
gcatacttat	cgtggcggtg	ggcatgtacg	tccgaacgtt	gatttgcatg	caagccgaaa	240
ttaaatcatt	gcgattagtg	cgattaaaac	gttgtacatc	ctcgctttta	atcatgccgt	300
cgattaaatc	gcgcaatcga	gtcaagtgat	caaagtgtgg	aataatgttt	tctttgtatt	360
cccaggtcaa	gcgcagcgcg	tattttaaca	aactagccat	cttgtaagtt	agtttcattt	420
aatgcaactt	tatccaataa	tatattatgt	atcgacgtc	aagaattaac	aatgcgccc	480
ttgtcgcac	tcaacacgac	tatgatagag	atcaataaaa	gcgcgaatta	aatagcttgc	540
gacgcaacgt	gcacgatctg	tgacgcgtt	ccggcagcag	ctttgattgt	aataagtttt	600
tacgaagcga	tgacatgacc	cccgtagtga	caacgatcac	gcccataaga	actgccgact	660
acaaaattac	cgagtatgtc	ggtgacgtta	aaactattaa	gccatccaat	cgaccgttag	720
tcgaatcagg	accgctgggtg	cgagaagccg	cgaagtatgg	cgaatgcac	gtataacgtg	780
tggagtcgcg	tcattagagc	gtcatgttta	gacaagaaa	ctacatattt	aattgatccc	840
gatgatttta	ttgataaatt	gaccctaact	ccatacacgg	tattctacaa	tggcgggggt	900
ttggtcaaaa	tttcgggact	gcgattgtac	atgctgttaa	cggctccgcc	cactattaat	960
gaaattaaaa	attccaattt	taaaaaacgc	agcaagagaa	acatttgtat	gaaagaatgc	1020
gtagaaggaa	agaaaaatgt	cgtcgacatg	ctgaacaaca	agattaatat	gcctccgtgt	1080
ataaaaaaaa	tattgaacga	tttgaaagaa	aacaatgtac	cgcgcgccg	tatgtacagg	1140
aagaggttta	tactaaactg	ttacattgca	aacgtggttt	cgtgtgcaa	gtgtgaaaac	1200
cgatgtttta	tcaaggctct	gacgcatttc	tacaaccacg	actccaagt	tgtgggtgaa	1260
gtcatgcac	ttttaatcaa	atcccaagat	gtgtataaac	caccaaactg	ccaaaaaatg	1320
aaaactgtcg	acaagctctg	tccgtttgct	ggcaactgca	agggctctca	tcctatttgt	1380
aattattgaa	taataaaaca	attataaatg	ctaaatttgt	ttttatttaa	cgatacaaac	1440
caaacgcaac	aagaacattt	gtagtattat	ctataattga	aaacgcgtag	ttataatcgc	1500
tgaggtaata	tttaaaatca	ttttcaaagt	attcacagtt	aatttgcgac	aatataattt	1560
tattttcaca	taaactagac	gccttgctgt	cttcttcttc	gtattccttc	tctttttcat	1620
ttttctcttc	ataaaaatta	acatagttat	tatcgtatcc	atatatgtat	ctatcgtata	1680
gagtaaattt	tttgttgtca	taaatatata	tgtctttttt	aatgggggtg	atagtaccgc	1740
tgcgcatagt	ttttctgtaa	tttacaacag	tgctattttc	tggtagttct	tcggagtgtg	1800
ttgctttaat	tattaaattt	atataatcaa	tgaatttggt	atcgctcggt	ttgtacaata	1860
tgttgccggc	atagtacgca	gcttcttcta	gttcaattac	accatttttt	agcagcaccg	1920
gattaacata	actttccaaa	atgttgtacg	aaccgttaaa	caaaaacagt	tcacctccct	1980
tttctatact	attgtctgcg	agcagttggt	tggtgttaaa	aataacagcc	attgtaatga	2040
gacgcacaaa	ctaataatcac	aaactggaaa	tgtctatcaa	tatatagttg	ctgatattct	2100
cccagcatgc	ctgctattgt	cttcccaatc	ctcccccttg	ctgtcctgcc	ccacccacc	2160
ccccagaata	gaatgacacc	tactcagaca	atgcgatgca	atttctctcat	tttattagga	2220

aaggacagtg	ggagtggcac	cttccagggg	caaggaaggc	acgggggagg	ggcaaacaac	2280
agatggctgg	caactagaag	gcacagtcga	ggctgatcag	cgagctctag	tctagactat	2340
tatttaccgg	gagacagggg	gaggctcttc	tgcgtgtagt	ggttgtgcag	agcctcatgc	2400
atcacggagc	atgagaagac	gttcccctgc	tgccacctgc	tcttgtccac	ggtgagcttg	2460
ctgtagagga	agaaggagcc	gtcggagtcc	agcacgggag	gcgtggtcct	gtagttgttc	2520
tccggctgcc	cattgctctc	ccactccacg	gcatgtcgc	tgggatagaa	gcctttgacc	2580
aggcaggtca	ggctgacctg	gttcttgggtc	agctcatccc	gggatggggg	caggggtgtac	2640
acctgtgggt	ctcggggctg	ccctttgggt	ttggagatgg	ttttctcgat	gggggctggg	2700
agggctttgt	tggagacctt	gcacttgtac	tccttgccat	tcagccagtc	ctggtgcagg	2760
acgggtgagga	cgctgaccac	acgggtacgtg	ctgttgtact	gctcctcccg	cggctttgtc	2820
ttggcattat	gcacctccac	gccgtccacg	taccagttga	acttgacctc	aggggtcttcg	2880
tggctcacgt	ccaccaccac	gcatgtgacc	tcaggggtcc	gggagatcat	gaggggtgtcc	2940
ttgggttttg	gggggaagag	gaagactgac	ggtcccccca	ggagttcagg	tgctgggcac	3000
ggtgggcatg	tgtgagtttt	gtcacaagat	ttgggctcaa	ctttcttgtc	caccttggtg	3060
ttgctgggct	tgtgattcac	gttgagatg	taggtctggg	tgcccaagct	gctggagggc	3120
acggtcacca	cgctgctgag	ggagtagagt	cctgaggact	gtaggacagc	cgggaaggtg	3180
tgcacgccgc	tggtcagggc	gcctgagttc	cacgacaccg	tcaccgggtc	ggggaagtag	3240
tccttgacca	ggcagcccag	ggccgctgtg	ccccagagg	tgctcttggg	ggaggggtgc	3300
agggggaaga	cgcaggggct	cttatcaaac	tagtgcaacg	ttgactaaga	atttcatcgc	3360
gccgcgtacg	attgtaaata	aaatgtaatt	tacagtatag	tattttaatt	aatatacaaa	3420
tgatttgata	ataattctta	tttaactata	atatattgtg	ttgggttgaa	ttaaaggtcc	3480
cggcatcctc	aaatgcataa	tatcatagtc	ccccttggtg	taagtgatgc	gtatttctga	3540
atctttgtaa	aatagcacac	aggactccaa	cgcgtttggc	gttttatttt	cttgctcgag	3600
gatatcatgg	agataattaa	aatgataacc	atctcgcaaa	taaataagta	ttttactgtt	3660
ttcgtaacag	ttttgttaata	aaaaaaccta	taaatattcc	ggattattca	taccgtccca	3720
ccatcggggc	tgctagcggg	tccatgggtg	gaccctgcat	gctgctgctg	ctgctgctgc	3780
taggcctttg	ataacaccca	gtgtcactct	gttcccgcgc	tcctctgagg	agcttcaagc	3840
caacaaggcc	acactgggtg	gtctcataag	tgacttctac	ccgggagccg	tgacagtggc	3900
ctggaaggca	gatagcagcc	ccgtcaaggc	gggagtggag	accaccacac	cctccaaaca	3960
aagcaacaac	aagtacgcgg	ccagcagcta	cctgagcctg	acgcctgagc	agtgggaagtc	4020
ccacaaaagc	tacagctgcc	aggtcacgca	tgaaggaggc	accgtggaga	agacagtggc	4080
ccctacagaa	tgttcatagt	aaaagcttgt	cgttggatgg	aaaggaaaag	agttctacag	4140
ggaaacttgg	acccgcttca	tgggaagacg	cttccccatt	gttaacgacc	aagaagtgat	4200
ggatgttttc	cttggtgtca	acatgcgtcc	cactagaccc	aaccgttgtt	acaaattcct	4260
ggcccaacac	gctctgcgtt	gcgaccccga	ctatgtacct	catgacgtga	ttaggatcgt	4320
cgagccttca	tgggtgggca	gcaacaacga	gtaccgcata	agcctggcta	agaagggcgg	4380
cggctgcccc	ataatgaacc	ttcactctga	gtacaccaac	tcggtcgaac	agttcatcga	4440
tcggtctatc	tgggagaact	tctacaagcc	tacagtttac	atcgggtaccg	actctgctga	4500
agaggaggaa	attctccttg	aagtttccct	ggtgttcaaa	gtaaaggagt	ttgcaccaga	4560
cgcacctctg	ttcactgggtc	cggcgattta	aaacacgata	cattgttatt	agtacattta	4620
ttaagcgcta	gattctgtgc	gttggtgatt	tacagacaat	tgttgtacgt	attttaataa	4680
ttcattaaat	ttataatctt	tagggtggta	tgttagagcg	aaaatcaaat	gattttcagc	4740
gtctttatat	ctgaatttaa	atattaaatc	ctcaatagat	ttgtaaaata	ggtttcgatt	4800
agtttcaaac	aagggttggt	tttccgaacc	gatggctgga	ctatctaata	gattttcgct	4860
caacgccaca	aaacttgcca	aatcttgtag	cagcaatcta	gctttgtcga	tattcgtttg	4920
tgttttgttt	tgtaataaag	gttcgacgtc	gttcaaaata	ttatgcgctt	ttgtatttct	4980
ttcatcactg	tcgtagtggt	acaattgact	cgacgtaaac	acgttaaata	aagctagctt	5040
ggacatatat	aacatcgggc	gtgttagctt	tattaggccg	attatcgtcg	tcgtcccaac	5100
cctcgctcgt	agaagttgct	tccgaagacg	attttgccat	agccacacga	cgcctattaa	5160
ttgtgtcggc	taacacgtcc	gcgatcaaat	ttgtagttag	gctttttgga	attatttctg	5220
attgcggggc	tttttggggc	ggtttcaatc	taactgtgcc	cgattttaat	tcagacaaca	5280
cgtagaaaag	cgatggtgca	ggcgggtgga	acatttcaga	cggcaaactc	actaatggcg	5340
gcgggtggtg	agctgatgat	aaatctacca	tcggtggagg	cgcaggcggg	gctggcggcg	5400
gaggcggagg	cggaggtggt	ggcgggtgatg	cagacggcgg	tttaggctca	aatgtctctt	5460
taggcaacac	agtcggcacc	tcaactattg	tactgggttc	gggcgcgcgt	tttgggttga	5520

ccggtctgag	acgagtgcga	tttttttcgt	ttctaatagc	ttccaacaat	tgttgtctgt	5580
cgtctaaagg	tgcagcgggt	tgaggttccg	tcggcattgg	tggagcgggc	ggcaattcag	5640
acatcgatgg	tggtgggtgg	ggtggaggcg	ctggaatgtt	aggcacggga	gaagggtggtg	5700
gcggcgggtgc	cgccggtata	atttgttctg	gtttagtttg	ttcgcgcacg	attgtgggca	5760
ccggcgcagg	cgccgctggc	tgcacaacgg	aaggctcgtct	gcttcgaggc	agcgcttggg	5820
gtggtggcaa	ttcaatatta	taattggaat	acaaatcgta	aaaatctgct	ataagcattg	5880
taatttctgct	atcgtttacc	gtgccgatat	ttaacaaccg	ctcaatgtaa	gcaattgtat	5940
tgtaaagaga	ttgtctcaag	ctccgcacgc	cgataacaag	ccttttcatt	tttactacag	6000
cattgtagt	gcgagacact	tcgctgtcgt	cgactcgagt	tctatagtgt	cacctaaatc	6060
gtatgtgtat	gatacataag	gttatgtatt	aattgtagcc	gcgttctaac	gacaatatgt	6120
ccatatgggtg	cactctcagt	acaatctgct	ctgatgccgc	atagttaagc	cagccccgac	6180
acccgccaac	acccgctgac	gcgccctgac	gggcttgtct	gctcccggca	tccgcttaca	6240
gacaagctgt	gaccgtctcc	gggagctgca	tgtgtcagag	gttttcaccg	tcacaccgca	6300
aacgcgcgag	aggaaagggc	ctcgtgatac	gcctattttt	ataggttaat	gtcatgataa	6360
taatggtttc	ttagacgtca	ggtggcactt	ttcggggaaa	tgtgcgcgga	acccctattt	6420
gtttattttt	ctaaatacat	tcaaataatgt	atccgctcat	gagacaataa	ccctgataaa	6480
tgcttcaata	atattgaaaa	aggaagagta	tgagtattca	acatttccgt	gtcgccttta	6540
ttcccatttt	tgcggcattt	tgcttctctg	tttttgcctc	cccagaaacg	ctgggtgaaag	6600
taaaagatgc	tgaagatcag	ttgggtgcac	gagtggttta	catcgaactg	gatctcaaca	6660
gcggtaaagt	ccttgagagt	tttcgccccg	aagaacgttt	tccaatgatg	agcactttta	6720
aagttctgct	atgtggcgcg	gtattatccc	gtattgacgc	cgggcaagag	caactcggtc	6780
gccgcataca	ctattctcag	aatgacttgg	ttgagtactc	accagtcaca	gaaaagcatc	6840
ttacggatgg	catgacagta	agagaattat	gcagtgtctg	cataaccatg	agtataaaca	6900
ctgcggccaa	cttacttctg	acaacgatcg	gaggaccgaa	ggagctaacc	gcttttttgc	6960
acaacatggg	ggatcatgta	actcgcttgg	atcgttggga	accggagctg	aatgaagcca	7020
taccaaacga	cgagcgtgac	accacgatgc	ctgtagcaat	ggcaacaacg	ttgcgcaaac	7080
tattaactgg	cgaactactt	actctagctt	cccggcaaca	attaatagac	tggatggagg	7140
cggataaagt	tgcaggacca	cttctgcgct	cggcccttcc	ggctggctgg	tttattgctg	7200
ataaatctgg	agccggtgag	cgtgggtctc	gcggtatcat	tgcagcactg	gggccagatg	7260
gtaagccctc	ccgtatcgta	gttatctaca	cgacggggag	tcaggcaact	atggatgaac	7320
gaaatagaca	gatcgctgag	ataggtgcct	cactgattaa	gcatttgtaa	ctgtcagacc	7380
aagtttactc	atatatactt	tagattgatt	taaaacttca	tttttaattt	aaaaggatct	7440
aggtgaagat	cctttttgat	aatctcatga	ccaaaatccc	ttaacgtgag	ttttcgttcc	7500
actgagcgtc	agaccccgta	gaaaagatca	aaggatcttc	ttgagatcct	ttttttctgc	7560
gcgtaatctg	ctgcttgcaa	acaaaaaac	caccgctacc	agcgggtggt	tgtttgccgg	7620
atcaagagct	accaactctt	tttccgaagg	taactggctt	cagcagagcg	cagataccaa	7680
atactgtcct	tctagtgtag	ccgtagttag	gccaccactt	caagaactct	gtagcaccgc	7740
ctacatacct	cgctctgcta	atcctgttac	cagtggtgcg	tgccagtggc	gataagtcgt	7800
gtcttaccgg	gttggaactc	agacgatagt	taccggataa	ggcgagcg	tcgggctgaa	7860
cgggggggttc	gtgcacacag	cccagcttgg	agcgaacgac	ctacaccgaa	ctgagatacc	7920
tacagcgtga	gcattgagaa	agcgccacgc	ttcccgaagg	gagaaaggcg	gacaggtatc	7980
cggtaagcgg	cagggtcgga	acaggagagc	gcacgaggga	gcttccaggg	ggaaacgcct	8040
ggatatcttta	tagtctgtc	gggtttcgcc	acctctgact	tgagcgtcga	tttttgtgat	8100
gctcgtcagg	ggggcgagc	ctatggaaaa	acgccagcaa	cgcggccttt	ttacggttcc	8160
tggccttttg	ctggcctttt	gtcacatgt	tctttctctg	gttatccctt	gattctgtgg	8220
ataaccgtat	taccgccttt	gagtgaactg	ataccgctcg	ccgcagccga	acgaccgagc	8280
gcagcgagtc	agtgaagcag	gaagcggaag	agcgcccaat	acgcaaaccg	cctctccccg	8340
cgcgttgggc	gattcattaa	tgcaggttaa	cctggcttat	cgaaattaat	acgactcact	8400
ataggagagac	cggcagatcg	atctgtcga				8429

<210> 44

<211> 120

<212> DNA

<213> Autographa californica nucleopolyhedrovirus

<400> 44

cttttctata ctattgtctg cgagcagttg tttgttgta aaaataacag ccattgtaat 60
gagacgcaca aactaatatc acaaactgga aatgtctatc aatatatagt tgctgatatc 120

<210> 45

<211> 230

<212> DNA

<213> Autographa californica nucleopolyhedrovirus

<400> 45

tcgagcaaga aaataaaaacg ccaaacgcgt tggagtcttg tgtgctatct taaaaagatt 60
cagaaatacg catcacttac aacaaggggg actatgaaat tatgcatttg aggatgccgg 120
gacctttaat tcaacccaac acaatatatt atagttaaatt aagaattatt atcaaatac 180
ttgtatatta attaaaatac tatactgtaa attacatttt atttacaatc 230

<210> 46

<400> 46

000

<210> 47

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 47

ttgcttactg cacaggatcc gtg 23

<210> 48

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 48

tgccgtcggc aggaggtatt tcattatgac tgtctccttg ctattatgaa cattctgtag 60
gggcca 66

<210> 49

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 49

gtcagcccaa ggctgcaccc agtgtcactc tgttcc

36

<210> 50

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 50

cgtatcaagc ttttactatg aacattctgt aggggccac

39

<210> 51

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 51

cctttgataa caccca

16

<210> 52

<211> 13

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 52

gtgttatcaa agg

13

<210> 53

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 53

ctagtttgat aagggcc

17

<210> 54

<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 54
cttatcaaa

9

<210> 55
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 55
cctttgataa caccaa

16

<210> 56
<211> 61
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 56
ttactagttt ttatggtcgt gtacatttct tacatctatg ctgacgctgg agttacccag 60
a 61

<210> 57
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 57
aggagacctt ggggtggagtc gggcccttca gatacctc

37

<210> 58
<211> 393
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: RMA Vb PCR
Product

<400> 58

```
actagttttt atggtcgtgt acatttctta catctatgcg gacgctggag ttaccagac 60
acccagacat gaggtggcag agaaaggaca aacaataatc ctgaagtgtg agccagtttc 120
aggccacaat gaccttttct ggtacagaca gaccaagata cagggactag agttgctgag 180
ctacttccgc agcaagtctc ttatggaaga tgggtggggct ttcaaggatc gattcaaagc 240
tgagatgcta aattcatcct tctccactct gaagattcaa cctacagaac ccaaggactc 300
agctgtgtat ctgtgtgccg gcagtaccgg gacagaaacg ctgtattttg gctcaggaac 360
cagactgact gttctcgagg atctgaaggg ccc 393
```